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Chatbots and the battle for search

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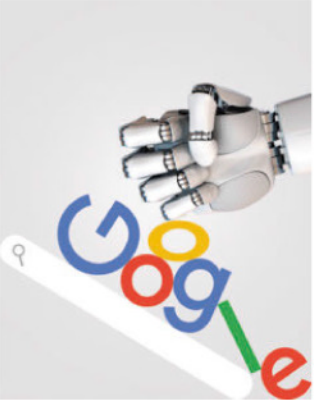

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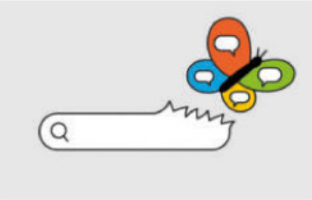

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to take part in *"a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."*

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The world this week Politics

An **earthquake** of magnitude 7.8 struck southern Turkey and northern Syria, killing at least 16,000 people. A second powerful earthquake followed shortly after. The toll is expected to rise significantly. It was the world's deadliest earthquake since 2010, when 220,000 people died in Haiti, or 2011 in Japan, where 21,000 were killed, but mostly by a resulting tsunami. Turkey imposed a state of emergency in the affected areas.

Parts of northern **Syria**, devastated by more than a decade of civil war, were struck by the earthquakes. Bab al-Hawa, a crucial border crossing with Turkey that allows international aid into the country, was left unpassable. The UN announced that cross-border aid had been temporarily halted.

Lovely to see you

Volodymyr Zelensky visited London, his second trip outside Ukraine since Russia's invasion. The Ukrainian president gave a speech to Parliament, where he appealed for more combat aircraft, or "wings for freedom" as he described them. Britain promised money to train fighter pilots. Mr Zelensky then headed to Paris and Brussels where he made similar requests.

In a break from the calendar used by Russian orthodoxy the **Ukrainian Greek Catholic church**, which counts around 10% of Ukraine's population as followers, announced that it would shift the celebration of some feast days to match those of Christians in the West. Its Christmas Day will now fall on December 25th instead of January 7th.

Sweden's prime minister, Ulf Kristersson, said he hoped talks with Turkey would resume soon over his country's application to join **NATO**, which all member states must agree to. Negotiations came to a halt when a copy of the Koran was set alight near the Turkish embassy in Stockholm. Turkey's president suggested recently that he will look favourably on the application from Finland, which also wants to join, but not Sweden.

Rishi Sunak appointed Greg Hands as chairman of the Conservative Party, following the sacking of Nadhim Zahawi over a tax scandal. The **British** prime minister also created a new Department for Energy Security and Net Zero, and promoted Kemi Badenoch to business secretary.

Ayatollah Ali Khamenei, the supreme leader of **Iran**, has reportedly pardoned tens of thousands of prisoners, including many who were involved in recent anti-government protests. The head of the judiciary claimed that many of those arrested after the demonstrations had committed their crimes as a result of foreign propaganda. It is unclear when the prisoners will actually be released.

Tens of thousands of **Israelis** poured onto the streets of 20 cities for a fifth week of protests against the judicial reforms of Binyamin Netanyahu's government.

The number of people killed in violence linked to jihadist groups in **Africa** jumped by 48% in 2022, according to the Africa Centre for Strategic Studies, part of the Pentagon. At least 19,109 people were killed, most of them in the Sahel and Somalia, surpassing the previous peak in 2015.

Sergei Lavrov, Russia's foreign minister, making his third trip to Africa in eight months, met **Mali's** military government and promised to provide it with weapons. Russia has been extending its influence in central Africa and the Sahel through weapons sales and contracts for mercenaries from Wagner Group.

A court in **Hong Kong** began the trial of 47 former legislators and activists, the largest trial under the territory's national-security law, imposed in 2020. The defendants are accused of involvement in conducting an unofficial primary election aimed at helping government critics gain a majority in the legislature.

Red balloons

An American fighter jet downed a **Chinese balloon** off the coast of South Carolina. American officials called it a spy balloon. China said it was merely for weather observation and had gone astray. The discovery of the massive object, which flew over nuclear-missile sites, prompted the White House to cancel a visit to Beijing by the secretary of state, Antony Blinken.

Two days after America shot down the balloon the Chinese government acknowledged that another balloon, spotted over **Colombia**, was also from China.

Joe Biden gave a combative **state-of-the-union** speech to Congress, his first since the Republicans took control of the House of Representatives. The president was constantly heckled and at times engaged his detractors, for example by accusing some Republicans of trying to undermine Social Security and Medicare.

Earlier, the House voted, along party lines, to remove **Ilhan Omar** from her seat on the Foreign Affairs Committee because of past comments that were deemed to be anti-Semitic. Some say the removal of Ms Omar, who is Muslim, was revenge for the Democrats' dismissal of two Republicans from committees in 2021 for allegedly condoning violence against Democrats.

Guillermo Lasso, the centre-right president of **Ecuador**, lost a referendum that would have allowed crime suspects to be extradited. Mayoral elections were also held. Politicians linked to Rafael Correa, a former left-wing president, won several races.

A court in Seoul ruled that the government was liable for atrocities committed by **South Korean** troops during the **Vietnam war** in the 1970s—and that it must therefore compensate the survivor of a village massacre. South Korea was America's biggest foreign ally in the war. The ruling is expected to open the floodgates to thousands of compensation claims.

The premier of the most populous province of the **Solomon Islands** was removed by a confidence vote after he criticised the federal government for cosying up to China. Last year the country signed a security agreement with China, intensifying concerns in the West about China's growing influence in the Pacific islands.

Development of a new coal mine was halted on environmental grounds for the first time in **Australia**. The country's Labor government said the site in question was too close to the Great Barrier Reef.

LeBron James became the all-time top scorer in America's NBA basketball league. He made 38 points in a game, surpassing the record of 38,387 points over the career of Kareem Abdul-Jabbar, which had stood since 1989. Mr Abdul-Jabbar, 75, was sitting courtside to witness the achievement.

The business of **searching the internet**, dominated for over 20 years by Google, was on the cusp of disruption, with various announcements that chatbots based on artificial intelligence are to be incorporated into search engines. Microsoft unveiled a version of Bing with the technology that powers ChatGPT, made by OpenAI, a startup, in which Microsoft is a big investor. Finding itself on the back foot, Google launched Bard, its rival to ChatGPT. However, the company's share price fell sharply when Bard gave the wrong answer to a question on space telescopes in a video promoting its abilities.

Game over?

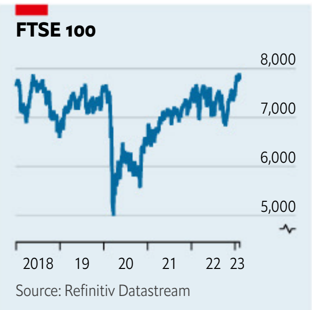
It was a mixed week for **Microsoft**, which received another blow to its planned takeover of **Activision Blizzard**, a maker of video games. Britain's competition regulator said the deal would be bad for consumers, and may not approve it. America's Federal Trade Commission is already suing to block the acquisition.

Some of the companies in the embattled **Adani Group** reported a rise in profits. That prompted a rally in their share prices after a two-week rout sparked by a short-seller's claim that the stock was being artificially inflated (Adani denies the allegation). Adani's controlling shareholders attempted to soothe markets by repaying a $1.1bn loan ahead of schedule.

Disney announced a restructuring of its business in which 7,000 jobs will be cut, around 3% of its workforce. It is the company's first big move since Bob Iger returned as chief executive in November. He said the changes would reshape Disney "around creativity" and make its streaming business profitable.

The great shake-out continued in the tech industry, as **Zoom** announced that it would cut 15% of its workforce, or 1,300 jobs. Eric Yuan, the chief executive, said he would take a cut to his salary and bonus. The company's headcount has tripled in two years, while post-pandemic demand for its video-conference services has slowed dramatically.

Investors seem to be enthused by the extensive cost-cutting at America's tech giants. Despite **Apple** reporting a 5% year-on-year drop in revenue for the last three months of 2022, which includes the crucial Christmas season, and **Google** posting a sharper-than-expected decline in advertising revenue, the **Nasdaq** composite held steady. The index is up by 15% since the start of the year.


FTSE 100

Source: Refinitiv Datastream

Britain's **FTSE 100** hit new record highs, surpassing its previous peak of May 2018. The Footsie outshone its American and European peers last year and has risen by 6% since the beginning of this year.

The FTSE 100's gains have come on the back of a surge in the share price **BP**, which announced a record annual profit, of $27.7bn. The company increased its dividend and share buy-back programme. But it lowered its target for cutting fossil-fuel production, from 40% by 2030 to 25%. Like others in the industry, BP is squeezed between keeping shareholders happy with high returns from pumping oil and gas and the push towards a net-zero economy. "We're responding to what society wants," mused its boss, Bernard Looney.

Russia's revenues from oil and gas fell by 46% in January, year on year, according to the finance ministry. With its spending on the war in Ukraine soaring, Russia's monthly budget deficit ballooned to 1.76trn roubles ($25bn).

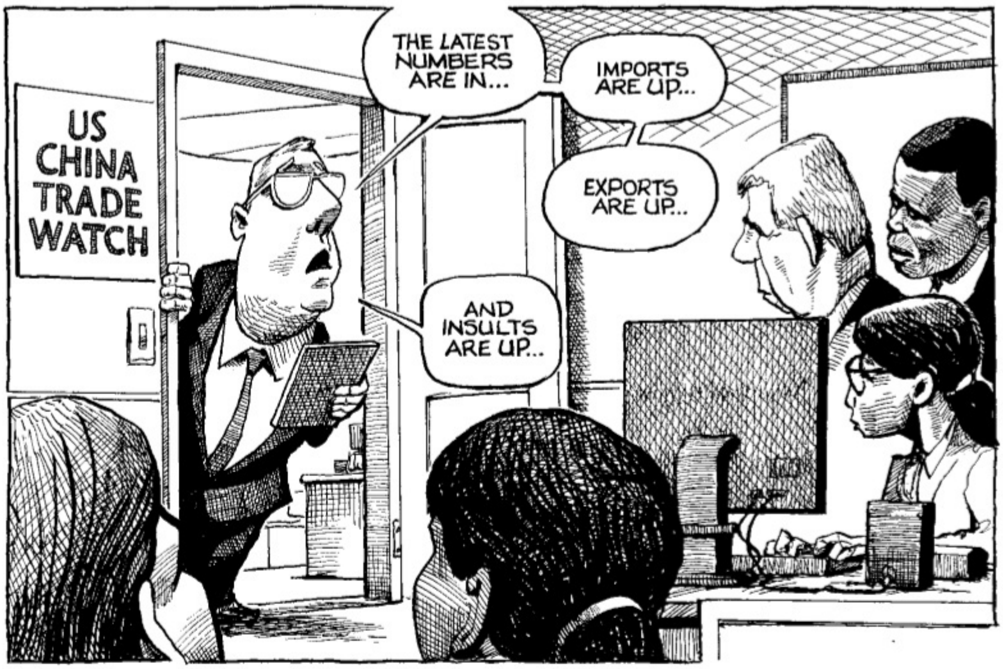
Credit Suisse reported an annual loss of SFr7.3bn ($7.9bn), its biggest since the global financial crisis of 2007-09. The Swiss bank was hit by a surge in withdrawals from wealthy clients in October.

A jury found that **Elon Musk** was not liable for losses incurred by a group of shareholders because of the market reaction in 2018 to his tweet about taking Tesla private, which did not happen. Mr Musk said he believed he had secured the funding to buy out the carmaker at the time of the tweet. The verdict vindicates his decision to fight the case rather than settle.

American employers created 517,000 **jobs** last month, the highest number for January since 1946 and well above the market forecast. Jerome Powell, chairman of the Federal Reserve, said that given strong data on the labour market and the economy, the central bank may have to prolong interest-rate rises for longer than investors might expect.

Sans Son

SoftBank's Vision Funds reported another big quarterly loss, of $5.5bn. It is a tough time for the Japanese conglomerate's investments, which have plunged in value as tech stocks and startup valuations have slid. Its investments in new ventures have all but dried up. Son Masayoshi, the company's boss, missed his usually exuberant earnings presentation. We hope that he will once again appear, said the chief financial officer, but we don't know when.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THE LATEST NUMBERS ARE IN...
IMPORTS ARE UP...
EXPORTS ARE UP...
AND INSULTS ARE UP..

The battle for search

What do AI chatbots mean for the lucrative business of searching the internet?

For more than 25 years, search engines have been the internet's front door. AltaVista, the first site to allow searches of the full text of the web, was swiftly dethroned by Google, which has dominated the field in most of the world ever since. Google's search engine, still the heart of its business, has made its parent, Alphabet, one of the world's most valuable companies, with revenues of $283bn in 2022 and a market capitalisation of $1.3trn. Google is not merely a household name; it is a verb.

But nothing lasts for ever, particularly in technology. Just ask IBM, which once ruled business computing, or Nokia, once the leader in mobile phones. Both were dethroned because they fumbled big technological transitions. Now tech firms are salivating over an innovation that might herald a similar shift—and a similar opportunity. Chatbots powered by artificial intelligence (AI) let users gather information via typed conversations. Leading the field is ChatGPT, made by OpenAI, a startup. By the end of January, two months after its launch, ChatGPT was being used by more than 100m people, making it the "fastest-growing consumer application in history", according to UBS, a bank.

AI is already used behind the scenes in many products, but ChatGPT has put it centre stage, by letting people chat with an AI directly. ChatGPT can write essays in various styles, explain complex concepts, summarise text and answer trivia questions. It can even (narrowly) pass legal and medical exams. And it can synthesise knowledge from the web: for example, listing holiday spots that match certain criteria, or suggesting menus or itineraries. If asked, it can explain its reasoning and provide detail. Many things that people use search engines for today, in short, can be done better with chatbots (see Business section).

Hence the flurry of announcements, as rival firms try to seize the initiative. On February 7th Microsoft, which has invested more than $11bn in OpenAI, revealed a new version of Bing, its search engine, which incorporates ChatGPT. Satya Nadella, Microsoft's boss, sees this as his chance to challenge Google. For its part, Google has announced Bard, its own chatbot, as a "companion" to its search engine. It has also taken a $300m stake in Anthropic, a startup founded by ex-OpenAI employees, which has built a chatbot called Claude. The share price of Baidu, known as the Google of China, jumped when it said it would release its chatbot, called Ernie, in March.

But can chatbots be trusted, and what do they mean for search and its lucrative advertising business? Do they herald a Schumpeterian moment in which AI topples incumbent firms and elevates upstarts? The answers depend on three things: moral choices, monetisation and monopoly economics.

ChatGPT often gets things wrong. It has been likened to a mansplainer: supremely confident in its answers, regardless of their accuracy. Unlike search engines, which mostly direct people to other pages and make no claims for their veracity, chatbots present their answers as gospel truth. Chatbots must also grapple with bias, prejudice and misinformation as they scan the internet. There are sure to be controversies as they produce incorrect or offensive replies. (Google is thought to have held back the release of its chatbot over such concerns, but Microsoft has now forced its hand.) ChatGPT already gives answers that Ron DeSantis, Florida's governor, would consider unacceptably woke.

Chatbots must also tread carefully around some tricky topics. Ask ChatGPT for medical advice, and it prefaces its reply with a disclaimer that it "cannot diagnose specific medical conditions"; it also refuses to give advice on, say, how to build a bomb. But its guardrails have proved easy to circumvent (for example, by asking for a story about a bombmaker, with plenty of technical detail). As tech firms decide which topics are too sensitive, they will have to choose where to draw the line. All this will raise questions about censorship, objectivity and the nature of truth.

Can tech firms make money from this? OpenAI is launching a premium version of ChatGPT, which costs $20 a month for speedy access even at peak times. Google and Microsoft, which already sell ads on their search engines, will show ads alongside chatbot responses—ask for travel advice, say, and related ads will pop up. But that business model may not be sustainable. Running a chatbot requires more processing power than serving up search results, and therefore costs more, reducing margins.

Other models will surely emerge: charging advertisers more for the ability to influence the answers that chatbots provide, perhaps, or to have links to their websites embedded in responses. Ask ChatGPT to recommend a car, and it will reply that there are lots of good brands, and it depends on your needs. Future chatbots may be more willing to make a recommendation. But will people use them if their objectivity has been compromised by advertisers? Will they be able to tell? Behold, another can of worms.

Then there is a question of competition. It is good news that Google is being kept on its toes by upstarts like OpenAI. But it is unclear whether chatbots are a competitor to search engines, or a complement. Deploying chatbots initially as add-ons to search, or as stand-alone conversation partners, makes sense given their occasional inaccuracies. But as their capabilities improve, chatbots could become an interface to all kinds of services, such as making hotel or restaurant reservations, particularly if offered as voice assistants, like Alexa or Siri. If chatbots' main value is as a layer on top of other digital services, though, that will favour incumbents which provide such services already.

Googling the future

Yet the fact that today's upstarts, such as Anthropic and OpenAI, are attracting so much attention (and investment) from Google and Microsoft suggests that smaller firms have a shot at competing in this new field. They will come under great pressure to sell. But what if an upstart chatbot firm develops superior technology and a new business model, and emerges as a new giant? That, after all, is what Google once did. Chatbots raise hard questions, but they also offer an opportunity to make online information more useful and easier to access. As in the 1990s, when search engines first appeared, a hugely valuable prize—to become the front door to the internet—may once again be up for grabs. ■

Turkey

Seismic shock

Why the devastating earthquakes might upend Turkish politics, too

NOBODY KNOWS how many people lie trapped under the rubble. When two powerful earthquakes hit southern Turkey and northern Syria on February 6th, thousands of buildings collapsed, burying families as they slept. Rescuers are racing to dig them out before they succumb to injury, thirst or the biting cold. By February 9th estimates of the death toll stood at more than 16,000; the true figure may be far higher. The World Health Organisation says it could be 20,000, which would make it even worse than the quake that struck Izmit, 100km (60 miles) east of Istanbul, in 1999, killing some 18,000. Buckled roads, complex terrain and the vast size of the affected area, spreading out along the East Anatolian fault for some 450km, are making the relief effort hellishly difficult to manage (see Europe section).

The quake-struck parts of Syria were previously battered by a decade of war. Syria's despot, Bashar al-Assad, is so wary of outsiders and heedless of human life that he may impede access for foreign relief agencies. Even in parts of Syria outside his control, entry relies on roads from Turkey that are now badly damaged. Turkey is naturally concentrating on its own people. Donors must try, against the odds, to ensure that Syria is not abandoned. So far, however, the response has been much too slow.

Even as the relief effort goes on, attention will turn to politics. President Recep Tayyip Erdogan, who has ruled Turkey for two decades, faces an election in May that was already going to be tough for him, thanks to a floundering economy and an inflation rate driven to over 50% by his foolish monetary policies. Voters will note his response to the earthquake, and ask why his government did not do more to prepare for such a disaster after the tremor of 1999. He knows it: government prosecutors have already launched investigations into two journalists for criticising the state's response.

There is a grim irony at work. Mr Erdogan came to power after an election in 2002. His new party, Justice and Development (AK), upended an establishment that had ineffectually governed Turkey since the restoration of democracy in 1983. The then government's weak response to the earthquake of 1999, followed by its mishandling of a financial crash in 2001, contributed to a sense that a clear-out was needed, and AK ended up with two-thirds of the seats in parliament. Now Mr Erdogan faces a similar set of circumstances; an economic crisis and a humanitarian one. Voters will judge him on his record in handling both.

The collapse of so many buildings in Turkey—nearly 6,000, according to the government—will invite scrutiny. Evidence will emerge that the advice of earthquake experts was ignored, and building codes were flouted while corrupt or incompetent supervisors looked the other way. One hallmark of the economic boom that made Mr Erdogan popular for his first decade in power was a surge in construction, though most of the buildings that collapsed were built before he came to office. He has had two decades to prepare for a big earthquake; it is hardly a secret that Turkey sits on one of the world's most active fault lines.

Mr Erdogan's poll ratings, and his party's, have been nearing record lows. Last month he brought forward the presidential and parliamentary elections from June to May, presumably to wrong-foot the opposition, which has still failed to unify around a single candidate for the top job. After the quake, the president declared a state of emergency in ten southern provinces, to last for three months, until almost the eve of the poll. No doubt there are commendable practical reasons for this. But it might also make it easier for Mr Erdogan to shut down criticism or opposition activity; indeed, access to Twitter was briefly restricted after people used it to lambast the government's response to the quakes. He might now postpone the elections. Turkey was already entering a difficult period. Plate tectonics has just made it more dangerous. ■

The Gulf's new social contract

Hedonism in the desert

A post-oil future means a social revolution in the Gulf

FANCY GOING to a rave in Saudi Arabia? The countries of the Gulf face a daunting transition away from fossil fuels in the coming decades. But another transition is happening in parallel that is just as striking: a shift from state-led economies and conservative social norms towards somewhat more liberal and open societies (see Middle East & Africa section). That prospect is thrilling. Millions of people will enjoy new freedoms and opportunities. But it is also disconcerting, because it brings the risk of social instability if autocratic governments fail to adapt. Whether the Gulf countries succeed in redrawing their social contracts matters not only to their people, but also to the world, because of their clout in oil and gas and their role in exporting cultural values across the Muslim world.

Ever since Gulf governments took control of oil and gas production from Western firms in the 1970s, the social contract has been clear. Rulers used petrodollars to pamper their subjects with everything from cushy public-sector jobs to water subsidies and bonuses for newlyweds. Foreigners were encouraged to move to the Gulf to do the jobs citizens either could not or would not do. There was no path for these migrants to become citizens, whether they were labourers sweating on construction sites or bankers in air-conditioned offices. And everyone—locals and expats—had to accept restrictive royal rule.

That contract will eventually become obsolete. One reason is climate change. The United Arab Emirates (UAE) and Saudi Arabia, which together pump 14m barrels of oil per day, know that demand for fossil fuels will fade. That gives them a window of 10-20 years to transform their economies. The war in Ukraine has led to a spike in energy prices that could mean the Gulf states earn $3.5trn from energy exports over the next five years, creating a kitty with which to invest. And the geopolitical context has changed, too. American support is less assured, while closer links are being forged with other states, from India to Israel.

Some of the changes are astounding. In Saudi Arabia, women who were barred from driving now motor to work. In 2017 17% of Saudi women either had a job or were looking for one; today the figure is 37%. Restaurants were once prohibited from playing music. Now there is talk of loosening the alcohol ban. As Saudi Arabia has liberalised, the UAE has responded with reforms, anxious to maintain its dominance as a business hub. Neighbouring Oman and gas-rich Qatar are more closed but are paying close attention—Qatar just hosted the football World Cup.

The euphoria may help dull the pain of economic reforms. Benefits are being cut. The UAE has ditched fuel subsidies. Saudi Arabia may follow. Since 2018 four of the six countries of the Gulf Cooperation Council have brought in a value-added tax. Income tax, once unimaginable, is now a possibility. In June the UAE will introduce a corporate tax. As government sinecures become less common the citizens of the Gulf are having to compete for private-sector jobs. Their governments are keen to attract more foreigners. The UAE, where expats make up nearly 90% of a 10m-strong population, wants to lure 3m-5m more.

All this creates a sense of insecurity as well as freedom. Gulf citizens will need the tools to succeed in a new era. Education is a good place to start. Schoolchildren in Qatar, Saudi Arabia and the UAE lag far behind their rich-country counterparts. Dropout rates are high because students—boys in particular—assume they can rely on a government job. A better education would prepare them to compete for one in the private sector.

Another challenge is the relationship between the state and individuals. More rights have already been recognised, at least on paper. In the UAE new laws decriminalise premarital sex and allow unmarried couples to live together. Punishments for sexual harassment and rape have been toughened. The UAE and Saudi Arabia are strengthening property rights for foreigners. The path to permanent residency, and perhaps even citizenship, will probably become easier. Foreigners who put down roots may one day demand rights.

Techno-cratic

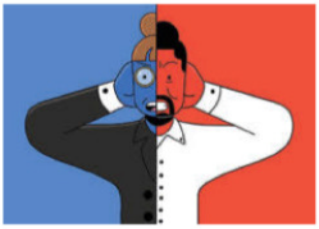
So far, greater social freedoms have been accompanied by more political repression and centralisation, particularly in Saudi Arabia, under its de facto ruler, Muhammad bin Salman. Yet a taste of freedom in their daily lives may spur people to seek more say in politics, too. At the very least governments will have to heed the grumbles when economic change creates losers, as it will. No Gulf country is likely to become a democracy any time soon. But if they are to wean their economies off hydrocarbons without provoking unrest, governments must become more responsive to ordinary citizens. Otherwise the music may stop. ■

Academic freedom

Wanted: severe contests

Universities that promote ideological conformity do students a disservice

When seeking a job to teach in the University of California system, academic excellence is not enough. Applicants must also submit a diversity, equity and inclusion (DEI) statement, explaining how they will advance those goals. That sounds fair enough, except that a promise to treat everyone equally would constitute a fail. Meanwhile in Florida, Governor Ron DeSantis and the state legislature are trying to ban the teaching of critical-race theory, an approach to studying racism with which they disagree. While this has been going on, a row has broken out (also in Florida) over a new pre-college course in African-American studies. These three developments have one thing in common: they are attempts to win arguments by controlling the institutions where those arguments take place (see United States section).



Threats to academic freedom in America can come from many directions. Students sometimes object to being exposed to ideas they deem troubling. Some even try to get faculty members fired for allowing such ideas to be voiced. Donors occasionally threaten to withdraw funding, which has a chilling effect on what can be taught. Speakers can be banned. Academics may self-censor, or succumb to groupthink. Occasionally American society demands restrictions on academic freedom, as when professors in the 1950s were asked to take loyalty tests to prove they were not communist sympathisers.

All these threats still exist. Plenty of people have rightly worried about academic freedom in America in the past. And yet one of the things that is distinctive about this moment is that the warring parties have determined that the best way to win the argument, and the most thorough way to stifle debate, is to remake institutions according to their preferences.

DEI statements may seem innocuous enough, and their intentions may seem laudable. Yet if they are used as a filter for hiring, they will filter out anyone who fails to toe the campus-progressive line, and anyone who objects on principle to ideological litmus tests.

In Florida, Mr DeSantis seems to be hoping that left-wing professors in state colleges will go to work somewhere else, creating openings for more conservative professors. The Stop WOKE Act, now law in Florida, bars teaching about systemic racism unless this is done "in an objective manner"—a qualifier which is rather subjective. Academics who cross the line will be threatened with dismissal.

As for that course on African-American history, a draft version was denounced from the right as dangerous woke nonsense and then, when it was revised, denounced from the left as a whitewashed version of black history. The notion that students might look at contradictory ideas and judge their merits was too terrifying to contemplate.

Partisans on both sides seem indecently eager to create separate institutions for liberals and conservatives, where the liberals would never have to hear wrongthink (a category that would include some of Martin Luther King's ideas, were they proposed by a less revered speaker), and the conservatives would never have to encounter the works of Derrick Bell (who has as good a claim as anyone to have developed critical-race theory).

No doubt this would make both ideological tribes happier. But it would be a disaster for the country. Democracy depends on citizens who can find compromises. Liberalism depends on taking an opponent's argument seriously and learning from it. America needs institutions that can have these debates, rather than monocultural incubators of mutually exclusive ideologies. DEI statements could even be repurposed to this end: rather than asking applicants what they have done to further racial diversity and equity, institutions of higher learning might start asking how they plan to further real diversity of thought. ■

China's balloon

Spy in the sky

To avoid perilous misunderstanding, China and America should talk more

There was something almost comic about the immense Chinese balloon, carrying equipment the size of a small passenger plane, that drifted over America for days until it was popped on February 4th by an American fighter jet. As cold-war-type moments go, it was light relief compared with, say, the Cuban missile crisis of 1962 or the crash-landing in 2001 of an American spyplane after a Chinese fighter collided with it. But this was no joke. America said the balloon was spying. For ordinary Americans, the threat from China was suddenly visible, overhead. In his state-of-the-union speech on February 7th, President Joe Biden warned: "make no mistake about it…if China threatens our sovereignty, we will act to protect our country. And we did."

American spooks play down what the balloon—or weather-observation craft, as China's government insists—discovered as it floated near military sites, including a base in Montana with Minuteman III intercontinental ballistic missiles. But they say that was because they tracked it closely and ensured no sensitive activities or communications took place within its range. Examination of its debris may reveal more about the operation, which America says is part of a vast aerial surveillance project based on Hainan island in southern China, which has targeted countries on five continents.

The episode illustrates why Sino-American rivalry is so hard to manage (see Chaguan). America's hyperpartisan politics were on full display as Republicans and Democrats competed to sound more hawkish, in an escalatory pattern that will probably feature heavily in the presidential campaign in 2024. The balloon may also reveal the blurred boundary between civilian and military activity, if debris recovered off the coast of South Carolina shows that American components are helping China to spy (see China section). The economic links between the two countries, from semiconductors to TikTok, are so broad that a vast array of activity now falls under suspicion.

The odds of more incidents like this are high. China may retaliate, for example by seizing an American ocean-survey drone—as it did in 2016 in the South China Sea, where the two countries' warships and fighters operate in close proximity. Chinese fury with America following a visit to Taiwan in August by Nancy Pelosi, then the speaker of America's House of Representatives, has resulted in ever more dangerous sabre-rattling by China's armed forces around the island, which China claims. There is an almost continual risk of small encounters that could spark a bigger conflict.

It is therefore crucial that cool heads prevail. The 20th century offers some lessons. In 1972 America and the Soviet Union managed to reach agreement on avoiding dangerous military encounters. In 1955 President Dwight Eisenhower proposed that Soviet spyplanes be allowed to fly over America, and vice versa, so that the two countries could be more assured of each other's intentions. The Russians baulked at the idea. It was only after the Soviet Union collapsed that it was taken up: 34 countries, including Russia and America, joined the Open Skies treaty that took effect in 2002. It allowed participants to surveil each other from the air after giving notice and a flight path (although Russia and America have recently pulled out of the deal).

Today far too few mechanisms for avoiding escalation exist. China's now-abandoned zero-covid policy meant it avoided face-to-face discussions for years. As president Mr Biden has met Xi Jinping, China's leader, only once, during a G20 meeting in November in Bali. As an American official said then: "It is critical to build a floor for the relationship and ensure that there are rules of the road that bound our competition." But after the balloon was shot down, China refused to hold a phone call between its defence chief and America's. For its part, America has called off a visit to Beijing by the secretary of state, Antony Blinken. The trip had been planned for February 5th and 6th and was to have included a meeting with Mr Xi. It needs to be rescheduled as soon as possible. Mr Blinken would be the first American cabinet secretary to visit Beijing since Mr Biden became president in 2021.

From cold war to hot air

New diplomatic and military accords to prevent accidents can be reached only if America and China talk more. America would like to discuss nuclear weapons, but China refuses. It believes that the less the rest of the world knows about its capabilities, the safer it will be. But as its global ambitions grow, China is becoming hungrier for intelligence and more daring in pursuit of it, continually raising the probability of clashes and accidents that could quickly spiral out of control. Some Americans and Chinese may have been intrigued or amused by the giant, drifting balloon. The bigger picture is alarming. ■

India Inc

The parable of Adani

The humbling of a tycoon is a test for Indian capitalism

It took a little over seven days for a corporate titan to be cut down to size. Only weeks ago Gautam Adani was the world's third-richest man and the self-proclaimed Rockefeller of India. Then a short-seller questioned his company's finances, investors took fright and $100bn in market value evaporated. Tens of billions have been wiped off the tycoon's personal wealth. Today the company is racing to show it can meet its debt payments.

The humbling in the markets calls into question Mr Adani's pharaonic ambitions. It is also a political embarrassment for Narendra Modi, the prime minister of India and a close associate of Mr Adani. And it confronts Indian capitalism with its sternest test in years (see Briefing).

Mr Adani's sprawling empire touches hundreds of millions of Indians' daily lives. It runs some of India's biggest ports, stores a third of its grain, operates a fifth of its power-transmission lines and makes a fifth of its cement. It was among India's top ten biggest non-financial firms, by assets, and had been projected to grow rapidly.

The prospects for that growth are now uncertain. In a report published on January 24th Hindenburg Research, an American short-seller, alleged that opaque entities based in Mauritius linked to the Adani family were manipulating the group's stock price. Although Adani denied the claims, it did not convince investors. Share prices plunged and financing plans were disrupted. Yields on bonds issued by the company have risen; those of the group's renewables arm trade at an eye-watering 19%.

For Mr Modi, big businesses are important planks in his plan to boost capital investment in India's infrastructure. But Mr Adani is unusual. His ties with Mr Modi were formed decades ago in Gujarat, the state where the politician was chief minister from 2001 to 2014, and where the tycoon got his start. When Mr Modi became prime minister, he flew to Delhi in Mr Adani's plane. Between then and the release of the Hindenburg report, Mr Adani's personal fortune mushroomed from around $7bn to $120bn.

The government may now be tempted to offer support to Mr Adani, implicitly or explicitly. But that would be a mistake. India has many of the conditions in place for a sustained growth spurt. If it is to achieve its potential, however, close, impartial scrutiny of big business will be vital.

Anyone who has spent time in India knows its desperate need for roads, bridges and power. In the years before the global financial crisis of 2007-09, a credit boom fuelled vast investments in infrastructure. But costs overran, red tape led to delays and financing costs soared. Too few projects were finished. Banks were left saddled with bad loans and growth sputtered.

Hence the allure for Mr Modi of a muscular industrial policy. He wants to make India a global manufacturing powerhouse. That cannot happen without good roads and reliable electricity. So big businesses have been cajoled to invest in infrastructure and to help develop local supply chains. Together Adani, Reliance Industries, Tata and JSW, some of India's biggest firms, plan to invest more than $250bn over the next five to eight years in infrastructure and emerging industries. Subsidies are also being handed out to foreign firms that expand production in India, including Samsung and Foxconn.

The strategy of picking winners was always fraught with risk, however, and Mr Adani's woes offer a warning of what can go wrong. A policy of expediting licences can also slip into favouritism. Another danger is that the winner you pick might not fulfil his promises. Adani Group says it has enough cash to complete all of its projects that are under construction. But its model of frenetic, debt-fuelled expansion is now surely less tenable.

The bigger the tycoon, the bigger the stakes become. Mr Adani alone is responsible for 7% of the capital investment by India's 500 largest non-financial firms. He is the dominant operator of the country's strategically important ports. His firm has promised to invest more than $50bn in such things as a new airport in Mumbai and steel mills in Gujarat. Should those investments struggle, projects will lie half-finished yet again.

So far Mr Modi has been silent about Adani's tribulations. The prime minister is popular enough that, despite a handful of protests organised by the opposition Congress party, the immediate political fallout from the drama will be limited. Ministers have sought to reassure investors by saying that the country's macroeconomic fundamentals remain sound. But they will have to go further to show that India remains a reliable place to do business. If it is to grow rapidly, India will need vast amounts of capital from abroad, partly because it runs a current-account deficit. Foreign multinationals have become warier of entering countries where the governance is not up to scratch.

The government could start by reining in its favouritism and stepping up scrutiny of big businesses. If a tiny firm of short-sellers in New York can ask hard questions, why didn't the regulators? Hindenburg alleges that the Securities and Exchange Board of India, the country's markets watchdog, began an investigation into Adani in 2021 that has since gone quiet. The regulator should declare the status of any ongoing probes into Adani. And it should demand transparency from investment firms based in Mauritius, which are often at the heart of Indian stockmarket scandals. Adani has issued a 413-page report rebutting Hindenburg's claims.

Licence Raj to Silence Raj

The Modi years have in many ways eroded India's checks and balances. His government has steadily undermined the independence of the courts and the police. The media are mostly too cowed to investigate the mighty as they once did. Few Indian newspapers would have touched a story about Mr Adani had an American firm not asked the tough questions first. Mr Adani himself recently bought NDTV, a news channel that was once critical of the government but is now supine.

For India to prosper, its institutions will in the long run be just as important as its infrastructure. Indians benefit from clean power and level roads, to be sure; but they also need clean governance and a level playing field. ■

Only the strong can intervene

Jeffrey Sachs argues that neutral countries should mediate between Russia and Ukraine (By Invitation, January 21st). After his disastrous prescriptions for economic "shock therapy" in eastern Europe 30 years ago one would think he might want to sit this one out. His new idea is that countries such as Brazil and South Africa should be guarantors of a peace agreement, just as rich countries were supposed to guarantee the consequences from shock therapy. They didn't then and neutral countries won't now.

Mr Sachs does not say how his idea could be implemented. By imposing penalties at the UN Security Council, where America, Russia and others have a veto? By military force? It is difficult to imagine the Brazilian navy wanting to marshal blockades in the Black Sea, or the South African air force securing Crimean air space. As a result the efficacy of his argument is, once again, untestable.

Most of us will be hard pressed to think of any conflict which was resolved by the assumption that a club of decent kids can somehow intermediate in a schoolyard brawl between big tough ones. The naivety of the suggestion recalls a joke about a stranded economist trying to get off a desert island: just assume a life raft.

TIM GOLLIN
Bergamo, Italy

The great canal journey

Researchers investigating the industrialisation of Britain often overlook the canal system (Graphic detail, January 21st). In the 1740s Britain's roadways were mostly muddy paths. Enterprising manufacturers, looking to transport raw materials into their factories and distribute the finished goods, formed joint-stock companies to dig canals linking navigable rivers throughout the countryside. It was a great success, and may possibly explain the first bump in your chart describing GDP per person. By the middle of the 1800s Manchester, Liverpool, Birmingham, Leeds, Sheffield, London and other cities were connected by a rapid, smooth transport system. The canals were overtaken by the railways after 1850, a possible explanation for the second bump in GDP.

CHRISTINE HOWZE
Broomall, Pennsylvania

Digital protectionism

"Protectionist turns" (January 14th) highlighted America's startling shift towards protectionism, notably through subsidies. Protectionism is not limited to the United States. Even in the digital economy, data from the Global Trade Alert show that barriers to trade have been sharply on the rise, in particular through localisation requirements. The European Union and G20 have initiated over 1,700 legal acts since 2020 alone.

Some view this as a response to American protectionism. For instance, America's Commerce Department complained about a draft European scheme to classify cyber-security in the cloud (the EU cloud-services certification) because it allows only "EU headquartered firms" to gain the highest level of classification. American firms could therefore be excluded from that lucrative EU market. The scheme might also be in breach of the trade and co-operation agreement between Britain and the EU, and the EU's commitments in the WTO's general agreements on trade and government procurement.

Consumers and businesses on both sides of the Atlantic should worry about the higher prices and less choice that all this brings. To rectify this we need a renewed consensus on non-discrimination and national treatment among trading partners, to save the international rules-based system that America once supported.

PASCAL KERNEIS
Managing director
European Services Forum
Brussels

An Italian star of screen

Thank you for the obituary of Gina Lollobrigida, a phenomenon in film (February 4th). You could have added that her fame had an impact far beyond the cinema. There is for instance the Gina gasket, a breakthrough for assembling tunnels underwater from great hollow sections of pre-cast concrete. The Dutch inventor of the thick rubber seal named it after Gina to honour certain "curvy similarities".

And in an upsurge of civil war in Lebanon from 1982-84, Italian troops in a multinational force mostly escaped the bloody fates of the American and French contingents. It was widely supposed that the Italians' empathetic Mediterranean outreach had simply won the hearts of their Shia Muslim neighbours in Beirut's southern suburbs.

Or perhaps not. Over a decade later, the Syrian minister of defence revealed to *Al-Bayan*, a newspaper in Dubai, that it was he who had ordered the Lebanese resistance to spare the Italians. Why? Because of his love since his youth for Gina Lollobrigida, whom he wished to spare a "single tear" of distress.

HUGH POPE
Brussels

Lingvo vere tutmonda

Banyan found it comical that Baha'i missionaries to Japan used Esperanto to translate their creed (January 21st). Using Esperanto in Asia is no more comical than using English. China has published more than a hundred books in Esperanto and has regular radio broadcasts in the language. Esperanto can be learned in about quarter of the time needed to learn English. English conveys mainly the culture of its native speakers. By contrast Esperanto literature is written by native speakers of dozens of languages. The language is spreading ever wider around the world.

LOUIS V. WUNSCH-ROLSHOVEN
German Esperanto Association
Berlin

Worker toker

I partially disagree with the dry conclusion drawn by Bartleby about the relationship between cannabis use and creativity in the workplace (January 14th). Confidence in one's creative ideas is not always a given. The adage "write drunk, edit sober" may not guarantee a bestseller, but it can sometimes help fill a page, or a letter to *The Economist*, which would have remained blank otherwise.

JEAN-MAXIME RIVIERE
Buenos Aires

No Mickey Mouse operation

Mickey Mouse's hand always has only three fingers, as depicted in the illustration for your briefing ("Thrills and spills", January 21st). Soon after creating Mickey in the late 1920s Walt Disney realised that if his mouse became popular it would be drawn millions of times. Thousands of illustrations are needed for a cartoon lasting just a few minutes. By omitting one finger Disney produced significant savings in ink and labour. And because it also enabled easier and more flowing movements it has been copied by almost all cartoon artists since.

KEITH CARLSON
Belmont, Massachusetts

Will do the job for nothing

I read Bagehot's plea for British politicians to be more adequately funded (January 21st). It brought to mind a quip from long ago by the late John Arlott on the "Any Questions" radio programme: "So many people want to be MPs that the law of supply and demand suggests they need not be paid anything at all." The audience applauded loud and long.

J. FYLES
Thirsk, North Yorkshire

Letters are welcome and should be addressed to the Editor at
The Economist, The Adelphi Building,
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Following the cabinet resolution approving the 2010 Policy Paper and the cabinet resolution approving the 2019 updated Policy Paper for the electricity sector and Cabinet Resolution No.8 dated 16/3/2022, approving the National Electricity Policy entitled "Setting Lebanon's Electricity Sector on a Sustainable Growth Path"; and all calling for the appointment of the Executive Members of the Electricity Regulatory Authority (ERA),

And as a result of the studies previously conducted to review Law 462/2002, as required by Law 181/201 and the policy paper, which prompted the Ministry to carry out an in-depth study uncovering the necessity to introduce amendments addressing the gaps in the law,

And having concluded organizational design studies and workshops in cooperation with the World Bank team in Lebanon and the MEDREG, the association of regulatory authorities of the Mediterranean region, leading the ministry to adopt the optimal structure for the organization and the roles of the Executive Members of ERA, which require expertise in the technical, financial, legal, environmental and other regulatory related fields,

The Ministry of Energy and Water announces herein opening the reception of candidacies to select the Executive Members of ERA in Lebanon.

Applications will be accepted until March 31, 2023, provided that the candidates, each according to his competence, present by e-mail to the following address: **recruitERA@energyandwater.gov.lb** the documents mentioned in the appendix attached to this announcement. This e-mail address, the selection criteria and the required documents are published on the Ministry of Energy and Water's official website: **energyandwater.gov.lb**

The evaluation procedure will be conducted by an interview panel appointed by the Minister of Energy and Water and comprising government representatives along with respected local and international experts.

Minister of Energy and Water in Lebanon
Dr. Walid Fayad

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A tycoon at bay

MUMBAI

Why Adani Group's troubles will reverberate across India

"I LIKE CHALLENGES where you feel you are part of nation-building. I could have created many different businesses but I feel more satisfied when I create something that can be part of the India journey," Gautam Adani told *India Today*, a weekly news magazine, in 2011. The journey of Mr Adani's conglomerate, Adani Group, took an unexpected turn in late January, when an investment firm's critique of its finances caused the share prices of its various listed businesses to plunge. Given how closely Adani Group is associated with the government of Narendra Modi, and his ambitions for the economy, many observers are asking whether policymakers, too, could be steering in the wrong direction.

It is over two weeks since the publication of Hindenburg Research's report on the Adani Group, on January 24th, yet the alarm it created has still not dissipated. The American firm, which makes financial bets against companies it considers overvalued, argued that Adani Group had manipulated the prices of shares in its constituent companies. The group insists the claims are baseless; it has published a 413-page rebuttal.

Adani has also tried to reassure twitchy investors with displays of financial sobriety. On February 6th the Adani family said it would repay 18 months ahead of schedule a $1.1bn loan taken out using shares in the group's companies as collateral. The following day Adani Ports said it would pay down its debt by $605m this year and halve spending on new investments.

Yet the shares continue to gyrate: on February 6th, for example, shares in Adani Transmission fell by 10%, prompting trading to be suspended. That same evening it reported strong results; the following day its shares rose by 10%, prompting another suspension. The value of the Adani Group as a whole remains roughly half what it was before Hindenburg weighed in.

Indian media report that the main stockmarket regulator, the Securities and Exchange Board of India, has requested information about the ownership of the offshore firms that Hindenburg accused of acting on Adani's behalf. But the reports also claim that SEBI has given Adani six months to respond. Hindenburg's allegations, in other words, will not be categorically proven or dispelled any time soon.

Meanwhile, fresh criticisms and setbacks continue to surface. This week the Indian press pored over an analysis by Aswath Damodaran, a professor of finance at New York University. It argued that, despite their tumbling share prices, companies in Adani Group are still overvalued, given that the bulk of their assets are in staid, low-growth industries and infrastructure. On February 8th TotalEnergies, a giant French oil company, said it was delaying a $4bn investment in a scheme to make green hydrogen with Adani.

Spigots under scrutiny

Few imagine that the Adani Group is anywhere near collapse. It does, after all, own lots of real, revenue-generating assets, however overvalued they may be. In the same breath as he postponed the hydrogen scheme, Patrick Pouyanné, Total's boss, insisted that his firm's joint venture with Adani to sell natural gas remained sound. But Adani clearly feels pressure to trim its spending and reduce its debt.

The group says that it has the funds to complete all projects that are already under construction. But its straitened circumstances are likely to delay some of its

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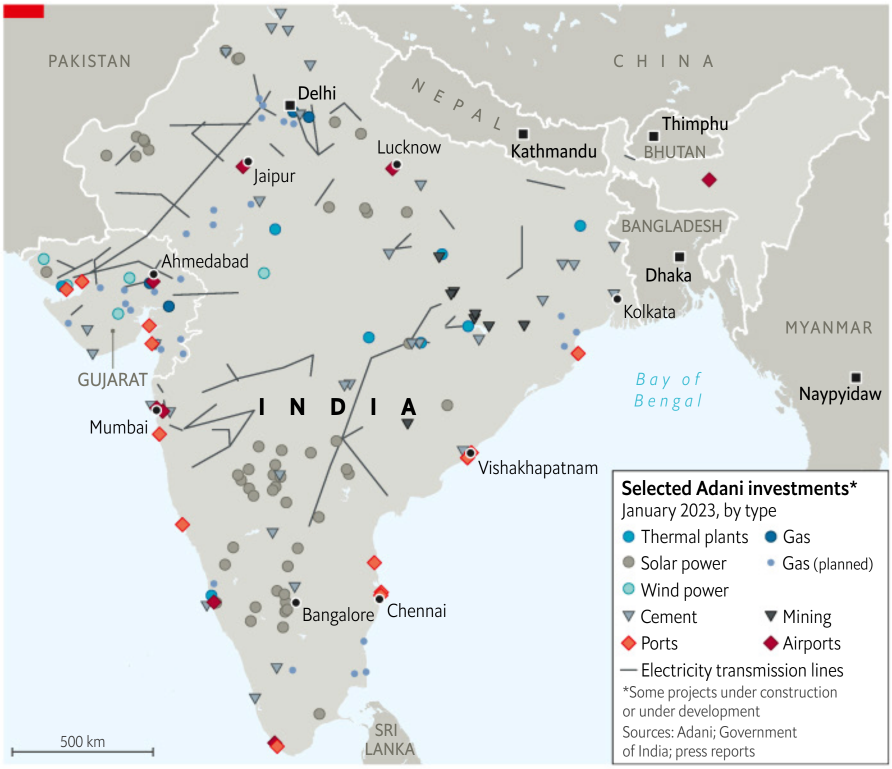


Selected Adani investments*
January 2023, by type

*Some projects under construction or under development

Sources: Adani; Government of India; press reports

more extravagant investment plans at the very least, and perhaps derail a few. Moody's, a rating agency, while affirming Adani's investment-grade status, has pointed out that much of its planned capital expenditure is "deferrable".

In some ways, that is a worrying thought. Adani's investments pepper India (see map). It accounts for 7% of the capital spending of India's 500 biggest listed firms. The group has promised to spend $70bn by 2030 on green investments—part of a cherished government plan to make India a green superpower. The Centre for Monitoring Indian Economy (CMIE), a research firm, keeps a database of big current and planned capital expenditures in India, both public and private. Adani accounts for 3% of the full pipeline of projects by value, but almost 10% of the newer projects, announced in the fiscal year that ended in March 2022. A curbing of Adani's investments, in short, could hardly be considered insignificant, even in the grand scheme of the Indian economy.

What is more, Adani is an especially big presence in certain industries. Its seven airports handle 23% of India's passenger traffic; its dozen ports receive or dispatch around 30% of India's international freight; its recently acquired cement business churns out 14-20% of India's total; its warehouses hold 30% of Indian grain; it is the country's biggest private generator of electricity from fossil-fuel plants (and a big one from renewables) and so on. Any scaling back of its investments would definitely be felt in these businesses.

Adani also has a reputation for being able to get things done. Take Mumbai's new airport, which an Adani subsidiary is building. The city's planners first mooted the construction of an airport to the east of the city in 1997. The plans were revised, argued over with residents, put out to tender, delayed, revised again and so on. In 2021 Adani took over the project after it was put out to tender yet again. From that point on, the $2.1bn project made rapid progress.

Today workers can be seen at the site, behind a blue steel barrier, transforming reclaimed land into a stone foundation for runways. Although planned completion dates for big infrastructure projects are typically the subject of derision, construction is expected to be finished next year and the airport to be operational by 2025. That is a meteoric pace, by any standard.

It is this ability to charge through the morass of regulation, legal wrangling and bureaucratic inertia that really distinguishes firms like Adani. India has always been a difficult place to do business. And that difficulty has always given sprawling family-owned conglomerates an edge over leaner, smaller rivals. Companies with clout and collateral find it easier to raise money and bend the bureaucracy to their will. And since clout and collateral are useful in any line of business, these groups naturally expand in scope, so as to make the most of their strengths.

The capacity to get things done is especially dear to Mr Modi, who prides himself on his ability to foster economic growth. He wants to drum up more investment, in manufacturing in particular. "If you're India and you are struggling to find a way to invest at the levels you need then it's sort of these guys or bust," says James Crabtree, whose book, "The Billionaire Raj" examines the rise of India's tycoons. "Adani might have…a taste for debt but with that comes genuine investment. Ports get built, rail lines get built, and that's sort of what India needs."

The growth model that Mr Modi honed first as chief minister of the state of Gujarat from 2001 to 2014 and then as prime minister "was premised on the state giving a set of favoured corporations concessions on land, on capital, on tax, on environmental and building clearance in exchange for setting up shop," says Milan Vaishnav of the Carnegie Endowment for International Peace, an American think-tank. "What we're seeing today is a scaling up of that model. So it's become pretty clear that this government believes in identifying and backing national champions."

Mr Modi is especially close to Mr Adani, whom he has known since the late 1980s. Mr Adani was one of the few business figures to stand by Mr Modi after sectarian riots in Gujarat in 2002 killed at least 1,000 people, mostly Muslims. In 2003 he helped set up an event called "Vibrant Gujarat", part of an effort to recast Mr Modi, tainted by association with the riots, as a pro-business leader. Mr Modi was a guest at the wedding of Mr Adani's son in 2013.

During the national election campaign the following year Mr Modi relied on a fleet of Adani aircraft to ferry him around; one even brought him to his swearing-in in Delhi. (Mr Adani said at the time that the flights had been fully paid for.) In Mr Modi's first year as prime minister alone, Mr Adani accompanied him on trips to America, Brazil, Canada, France and Japan. "Everywhere that Prime Minister Narendra Modi goes, it seems, Gautam Adani is sure to go," the *Hindustan Times*, a national daily, remarked in 2015.

Friends without benefits

Mr Adani has long denied that his close friendship with Mr Modi has had anything to do with Adani Group's success. "You can never get any personal help from Modi*ji*. You can speak to him about policies in the national interest, but when a policy is framed, it is for all," he said in an interview with an Indian television news channel in January. By the same token, the government has been careful to avoid leaping to Adani's defence. It has limited its public comments on the group's difficulties to anodyne assertions of faith in India's financial regulators.

All the same, the upheaval is embarrassing for Mr Modi. A state-controlled insurer has investments in the group; state-owned banks have lent to it. All have had to deny publicly that their exposure constitutes a serious risk. The government has repeatedly blocked the efforts of opposition parties to initiate a parliamentary debate or a formal public inquiry on the subject. The opposition, in protest, has resorted to theatrical disruptions of parliamentary proceedings.

But the palaver is unlikely to cause Mr Modi serious political harm. Few Indians believe that he has profited personally from his links to Mr Adani. Congress, the main opposition party, is on shaky ground when it comes to accusations of corruption. Its most recent term in office, from 2009 to 2014, was paralysed by constant allegations of bribery and embezzlement. Some Indians seem to accept Adani's contention that the accusations against it are part of "a calculated attack on India". "The whites can't bear to see India's progress," tweeted Virender Sehwag, a retired cricketer. "The hitjob on India's market looks like a well-planned conspiracy."

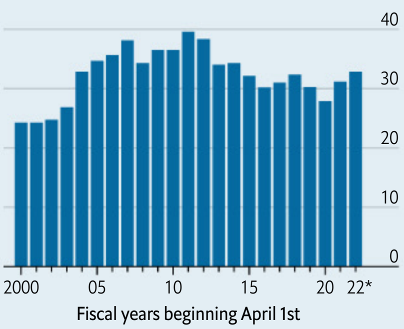
Moreover the exposure of Indian retail investors and mutual funds to Adani is tiny. The technical nature of Hindenburg's accusations render the report incomprehensible to most people. It helps that the media, much of which is owned by industrial conglomerates, rarely challenge the government or its allies in business. The last television news channel to air frequent criticisms of those in power, NDTV, was bought last year by Adani.

Mr Modi will still need capable firms to fulfil his ambitions for India's economy. But Adani is not the only company in India that can pull off big, complex investments. In 2016 Reliance debuted Jio, its low-cost 4G network that vaulted India's telecoms forward by a generation. Tata last year bought the beleaguered and debt-laden flag carrier, Air India, which the government had long struggled to privatise (and which Tata had originally owned before it was nationalised in 1953). Several of India's other conglomerates, although still enthusiastic borrowers, are bigger, less indebted and more profitable than Adani (see table).

The continued strength of India's conglomerates is a double-edged sword, however. They tend to sideline smaller firms that could grow into tomorrow's giants. Medium-sized businesses complain that they struggle to secure government contracts. The mere participation of a well-connected firm in an industry or a tender can discourage others from entering the fray, reducing competition and curtailing investment. "What is clear is you need to broaden opportunities to other private investors," says Trinh Nguyen, an economist at Natixis, an investment bank.

Not what it used to be

India, investment as % of GDP



Source: IMF

*Forecast

Capital crimes

India does not have an especially impressive record when it comes to deploying capital. In the 2000s groups like Reliance, GVK and GMR took the lead in an epic investment boom. Total capital spending reached 39% of GDP in 2011, up from less than 25% in 2002. Yet many of the projects concerned were over-optimistic. Lots of them wilted in the face of the global financial crisis, high oil prices and India's struggle to get a grip on rising inflation and a falling rupee. Banks were left saddled with copious bad debts. Investment fell back to about 30% of GDP (see chart). The country has been waiting for a revival ever since.

In recent years Mr Modi has done much to improve India's business climate. His government has cut the corporate tax rate, rationalised subsidies and streamlined labour laws (although the states have been slow to revise their own labour codes in response to the national legislation). Infrastructure and logistics is improving, thanks to the construction of roads and railway lines dedicated to freight.

India has also benefited from not being China, a country to which many Western multinationals want to limit their exposure. The size of India's domestic economy only adds to its appeal. In contrast to China, India has a young and growing population. Mr Modi's adoption of a countrywide goods-and-services tax (GST), in 2017, did away with an array of state and local levies that had acted as a barrier to internal trade. The GST, despite its complexity, created a vast single market of 1.4bn.

Mr Modi has tried to spur investment by offering "production-linked incentives", which bestow public money on firms in certain industries, such as electronics and pharmaceuticals, that meet output targets. At the back of policymakers' minds is the awareness that their country relies on foreign capital to finance its current-account deficit, which was 3.5% of GDP last year, according to the IMF.

But a decisive revival in private investment remains "elusive", points out Mahesh Vyas of CMIE. India's rules and regulations are still mercurial and subject to reversals, as foreign multinationals have discovered to their cost. One way to shield a business is to forge close political ties with powerful insiders. But those ties make it harder for other companies to prosper. Thus, as Arvind Subramanian of Brown University and Josh Felman of JH Consulting have argued, firms must worry about both changing rules and tilted playing fields.

Adani's woes could further delay a revival of investment. Accusations of share-price manipulation and unconvincing auditing cast an unfavourable light on India's stockmarket, corporate governance and regulatory practices. And the affair could pose an ongoing test to India's broader institutions—its political checks and balances, its press and civil society—a test they are not guaranteed to pass.

"Let me tell you what I have always heard from people. That Gujaratis can live anywhere, but cannot live without their own food," Mr Adani, who is himself Gujarati, declared in a speech during the "Vibrant Gujarat" conference in 2011. "But let me tell you, in my experience, I think a Gujarati can live without his *khakra*, *dhokla* or *thepla*. But one thing he cannot live without is success."

Mr Modi's recipe for economic growth has brought Mr Adani enormous success over the years. It has also helped Mr Modi come to dominate Indian politics. But the dish does not seem appetising enough to attract the desired level of investment. If the Gujarati urge to succeed is as strong as Mr Adani suggests, then Mr Modi, another Gujarati, should surely be cooking with greater care. ■

There are other whales in the sea

India, selected conglomerates

Financial year beginning April 1st 2021

Group	Assets, $bn	Debt, $bn	Debt-to-equity ratio	Net profit, $bn
Reliance	213.2	56.1	0.70	8.9
Tata	117.3	34.1	0.58	8.7
Aditya Birla	66.3	34.3	0.27	-1.5
Adani	65.5	30.2	1.09	2.2
OP Jindal	51.9	15.0	0.72	4.4

Source: CMIE

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ECONOMIST
IMPACT

Trade in Transition 2023

How are companies responding to recent geopolitical events?

Supported by DP WORLD

The world has been afflicted with global shocks in the past few years leading many experts to think that we are living through an age of a permacrisis. What these disruptions have in common is the knock-on disruption to global supply chains—whether microchip shortages or a rise in commodity prices. Companies are looking to increase resilience in an effort to insulate themselves from both current and future shocks.

The third edition of Economist Impact's Trade in Transition programme, supported by DP World, presents views from over 3,000 executives worldwide and their priorities as they navigate a turbulent trading environment. Over 96% of executives surveyed as part of this programme are making changes to their trade operations in response to geopolitical events. While companies are still primarily focused on diversifying their supplier base, the number of companies that are regionalising or nearshoring has increased substantially, from 12% in 2021 to 20% in 2022. Reshoring is also on the rise, with 15% of executives citing this as their supply-chain strategy in 2022, up from 5% in 2021.

Inflationary pressure is the top reason for pessimism among executives across sectors—from consumer goods to healthcare. It is expected that current levels of inflation will persist well into 2023. Recent supply-chain changes account for this, as 35% of executives are altering their supply chains to reduce costs. However, resilience is still being prioritised over short-term profitability with companies adopting the most costly demand-and supply-side strategies to enhance resilience.

Adoption of technology is both the most costly and most effective supply-side strategy, with 30% of executives citing it as their main way to improve inventory management. Companies are also increasing their adoption of 5G technologies, digital solutions and advanced automation to streamline their trade operations and build in further resilience. They have also not lost sight of implementing sustainability initiatives, with nearly a third (31%) of companies investing more than 5% of company profits into ESG initiatives.

This year's report looks at these and other resilience-building strategies. Read the full report to understand how companies are staying agile in an uncertain trading environment.

Find out more at:
tradeintransition.economist.com

United States

Universities

New testaments

WASHINGTON, DC

Mandatory diversity statements are taking hold of academia

THE UNIVERSITY OF CALIFORNIA, Berkeley is currently advertising for a "director of cell culture, fly food, media prep and on-call glass washing facilities". Applicants need an advanced degree and a decade of research experience, and must submit a CV, a cover letter and a research statement. They must also send in a statement on their contributions to advancing diversity, equity and inclusion. Seemingly everyone (this director, the next head of preservation for the library, anyone who dreams of a tenured professorship) must file a statement outlining their understanding of diversity, their past contributions to increasing it and their plans "for advancing equity and inclusion" if hired.

Not long ago, such statements were exotic and of marginal importance. Now they are de rigueur across most of the University of California system for hiring and tenure decisions. Studies claim that as many as one in five faculty jobs across America require them. And government agencies that fund scientific research are starting to make grants to labs conditional upon their diversity metrics and plans.

Proponents argue that such things are needed to advance concepts normally invoked by abbreviation: diversity, equity and inclusion (DEI), sometimes with "belonging" appended (DEIB), or "justice" (DEIJ), or else rearranged in a jollier anagram (JEDI). Critics—typically those with tenure rather than those seeking it—think mandatory statements constitute political litmus tests, devalue merit, open a back door for affirmative action, violate academic freedom and infringe on First Amendment protections for public universities. "There are a lot of similarities between these diversity statements as they're being applied now and how loyalty oaths [which once required faculty to attest that they were not communists] worked," says Keith Whittington, a political scientist at Princeton University. Who is right?

→ Also in this section

20 Drill, maybe, drill

21 Tech protectionism

22 Primaries reshuffled

23 Murdaugh most foul

24 Lexington: Man out of time

Advocates see no conflict between DEI and academic excellence. "It's hard to imagine being a good teacher if you don't know how to actively engage all students," says Sharon Inkelas, an associate vice-provost at Berkeley. Nor is it a matter of political belief. These statements "are descriptions of things that people have done that have enabled them to be successful in the classroom," says Professor Inkelas. A referendum has already outlawed affirmative action in California, so state institutions cannot give preferential treatment on the basis of race or sex. A separate law bans employers from "controlling or directing" the political activities of their employees.

"There is no litmus test attached to diversity statements. All that it's asking is, 'What are you going to be able to add to our campus? How are you going to deal with the diverse student body and faculty?'"

says Erwin Chemerinsky, dean of Berkeley’s law school and a well-known First Amendment scholar. “The absence of lawsuits so far, despite threats, is an indication that the diversity statements are legal. They don’t violate the First Amendment.”

It is hard to know whether DEI statements merely meet their goals or stray into political filtering. Davidson College, in North Carolina, asked prospective computer-science staff to write about their “potential to contribute to our commitment to equity and anti-racism”—a cause fervently embraced by the left and despised by the right. Berkeley has distributed guidance on how search committees ought to evaluate diversity statements. They say that any candidate who does not discuss gender or race must be awarded low marks. The same goes for any earnest classical liberal who “explicitly states the intention to ignore the varying backgrounds of their students and ‘treat everyone the same’.”

In 2018 Berkeley launched a “cluster search” for five faculty to teach biological sciences. From 894 applications, it created a longlist based on diversity statements alone, eliminating 680 candidates without examining their research or other credentials. This “yielded significant increases in URM [underrepresented minority] candidates advanced to shortlist consideration”, a university memo reported.

The dark side

Whether such a process privileges candidates of certain ethnic backgrounds over others is a sensitive question with legal implications. “It doesn’t appear that there’s any kind of correlation between particular identities and the quality of statements,” says Karie Frasch, the director of Berkeley’s Office of Faculty Equity and Welfare. When asked to clarify whether that meant scores did not differ by race, Dr Frasch says, “I’m not saying that. We don’t have that information. I shouldn’t have said the word ‘correlation’. I apologise.”

Berkeley is an important case study, not necessarily because it is the most extreme but because it is the most transparent. The University of California, Los Angeles has embraced diversity statements in hiring and tenure decisions even more fervently, but does not feel the need to explain its policies. A spokesperson said that Anna Spain Bradley, a law professor who serves as vice-chancellor for equity, diversity and inclusion, was unavailable for comment.

Critics worry about the proliferation of diversity criteria in science. Beginning this fiscal year, the Department of Energy, which funds research on nuclear and plasma physics among other things, will require all grant applications to submit plans on “promoting inclusive and equitable research”. Since 2021 the BRAIN Initiative at the National Institutes of Health has required prospective grantees to file a “plan for enhancing diverse perspectives”. Teams with investigators from diverse backgrounds receive precedence.

“People are unwilling to push back because they are afraid to lose their funding, and no one wants to become a martyr for defending reason,” says Anna Krylov, a professor of chemistry at the University of Southern California. Professor Krylov studied in the former Soviet Union and sees parallels that are “a little too close”. Rather than Marxism-Leninism, “you really have to pledge your commitment to critical social justice.”

If race-based affirmative action for college admissions is struck down by the Supreme Court, as most expect it will be this year, universities will surely resort to creative means of maintaining diversity that can survive judicial scrutiny. Diversity statements may prove useful. The subtlety can vary. The *Harvard Law Review* strongly encourages prospective editors to submit, alongside their application, a 200-word statement “to identify and describe aspects of your identity…including, but not limited to, racial or ethnic identity, socioeconomic background, disability (physical, intellectual, cognitive/neurological, psychiatric, sensory, developmental, or other), gender identity…” (the list goes on).

In many Republican-led states legislators are trying to forcibly eradicate this strain of thinking—sometimes in ways that seek to limit freedom of thought in the name of protecting it. Last year Republicans in Florida passed the Stop WOKE Act, which prohibits instruction at universities on ideas like systemic racism unless provided in “an objective manner without endorsement”. In 2021 those in Idaho passed a law banning the teaching of critical race theory in all schools, including public universities. Last month the Manhattan Institute, a conservative think-tank, released a piece of model legislation for states to emulate that would do less violence to the First Amendment, by dismantling DEI offices in universities and banning consideration of diversity statements in hiring.

Others are more sanguine. “I think it’s a fad,” says Janet Halley, a professor of law at Harvard. Bureaucratising ideology saps sincerity. “People will utter the hocus-pocus. They know that they’re being required to put on an act. And that’s going to create cynicism about the very values that the people who put these requirements into place care about,” she says. If those contradictions don’t sink the project, the courts might. Professor Halley believes these innovations are “forced speech and viewpoint discrimination in the First Amendment context” and will lead DEI dissidents to file lawsuits. “With the increasing conservatism of the federal bench, I think they’re likely to win.” ■

Oil and gas

Drill, maybe, drill

LOS ANGELES

Joe Biden is not quitting fossil fuels

REBUILDING AMERICA’S ECONOMY

ALASKA’S NORTH SLOPE, the arctic edge of America’s 49th state, is home to beavers, bears and caribou. Its coastal waters boast bearded seals and bowhead whales. Indigenous people have lived here for millennia. But the region also encompasses the National Petroleum Reserve, or NPR-A. On February 1st the Bureau of Land Management (BLM), which helps govern America’s vast federal lands, advanced a colossal drilling project in the reserve. The ConocoPhillips project, known as Willow, could produce 180,000 barrels of crude each day. Environmentalists howl that the project is a “carbon bomb” anathema to President Joe Biden’s green goals. A final decision is expected within the month.

The Biden administration’s expected approval of Willow may indeed seem contradictory for a president who pledged to ban new oil and gas development on public lands. But sanctions on Russian crude and petrol-price shocks at home have revived a slogan usually associated with Republicans: drill, baby, drill.

The BLM has granted slightly more permits to drill oil and gas wells in the first half of Mr Biden’s presidency than in the first two years of Donald Trump’s term. The

Oil country

difference is marginal: Mr Biden approved roughly 6,500 permits to Mr Trump's 6,300, according to an analysis of BLM records. And Mr Trump's permit approvals in the second half of his term numbered 9,800. But Mr Biden's initial lead is still striking considering his green agenda, and Mr Trump's promotion of fossil fuels. Most permits during both administrations were granted in New Mexico, where drilling has gone gangbusters as the shale boom has transformed the Permian Basin.

But the number of permits issued is just one measure of a president's domestic energy strategy. A more comprehensive look at Mr Biden's leasing policies suggests that the permitting bonanza is more of a hangover from the Trump administration's devotion to hydrocarbons than an intentional policy change. A standard lease to start drilling on public land is ten years. It is common for companies to wait to apply for a permit, which allows them to start drilling, towards the end of a lease. That means the vast majority of permits issued under Mr Biden is on land leased during previous administrations. Compare the number of acres leased under each president, and Mr Biden seems to be the most lease-leery president in modern history.

The Inflation Reduction Act (IRA), Mr Biden's signature climate law, also offers mixed messages on the future of fossil-fuel production in America. The IRA raises royalty rates charged to the drillers, but it prohibits the BLM from leasing public land for renewables unless it also offers leases for oil and gas development. Aaron Weiss, the deputy director of the Centre for Western Priorities, which tracks drilling on public lands, says the trade-off was "Joe Manchin's cost of entry". The senator for West Virginia was the IRA's decisive vote, and is in favour of continued drilling.

Coal, oil and gas production on federal lands and waters accounts for about a quarter of America's total fossil fuel production, and nearly a quarter of the country's greenhouse gas emissions. Recent modelling from Brian Prest, an economist at Resources for the Future, a think-tank, suggests that higher royalty rates will not dent emissions in a meaningful way. Much more effective would be a carbon tax or a ban on new oil and gas leases, neither of which is currently politically feasible.

Alaska's politicians cheered Willow's advancement. The project is expected to bring in at least $8bn in tax revenue and 2,500 construction jobs. The BLM recommends that the Biden administration approve a limited version of the project that avoids drilling near sensitive wetlands and caribou habitats. This is the sort of unsatisfying compromise that may become more common as Mr Biden tries to tackle domestic energy security, increased foreign demand and conservation all at once. ■

Technology trade

Chains of control

WASHINGTON, DC

The history and limits of America's favourite new economic weapon

REBUILDING AMERICA'S ECONOMY

At 11:15AM ON October 7th, an American official published 139 pages of regulations on a website called the Federal Register. Across East Asia, from Taipei to Nanjing, semiconductor executives panicked. The American government was claiming jurisdiction over every line of code or machine part that had ever passed through the United States, and over the activities of every American citizen, everywhere on the planet. Companies using American code, equipment or people to make advanced computer chips bound for China had to stop, on pain of breaking the law.

It was a salvo from America's favourite new economic weapon, the Foreign Direct Product Rule (FDPR). Whereas some sanctions weaponise the ubiquity of the dollar to inflict harm by preventing targets from using it, the FDPR attempts to weaponise the ubiquity of American technology. It lets the government claim jurisdiction over almost every chip factory in the world, because almost every one contains hard-to-replace American tools. TSMC, a Taiwanese chipmaker, stopped selling advanced chips to Chinese customers immediately.

FDPR has become one of the most important weapons in America's arsenal for technological competition with China. One Republican lobbyist calls the Bureau of Industry and Security, the agency that administers it, "the tip of the spear". Young policy wonks are taking courses to study a subject that would have drawn yawns three years ago: export-compliance law.

This sweeping form of extraterritorial export control is not new. The concept was written down in 1959. But only in the past decade has FDPR been transformed from regulatory curio into front-line economic weapon. In the early 2010s Kevin Wolf, then at the Department of Commerce, wrote the first two export-control rules to use the idea. They restricted the export of products made with American technology from anywhere in the world to China if they were to be used for military purposes or to build satellites.

Meanwhile, America was also building a case against Huawei, a booming Chinese telecoms-equipment manufacturer which it had long suspected of embargo-busting, and of being a conduit for Chinese government spying. Discomfort with Chinese technological prowess deepened with the arrival of the Trump administration's China hawks in the White House in early 2017.

Only in May 2019, after trade talks with China broke down, did the Trump administration turn to export controls to attack Huawei. It placed the firm on a list of companies to which it is illegal to export technology from America, known as the Entity List—until then mostly used for shell companies and terrorist fronts. Huawei was now seen as a national-security threat.

Huawei's purchases of American-made technology were large enough that companies found it worthwhile to pore over the details. They found that it remained legal to supply Huawei with American technology if it was shipped from outside America. Many tech companies simply carried on supplying Huawei through offshore facilities, following the letter of the law.

This not only infuriated the Trump administration, it also annoyed companies that manufactured products in America. Huawei's inclusion on the Entity List discriminated against them. American chipmakers started lobbying for changes. If firms could be prevented from using American technology to supply Huawei from anywhere in the world, operations based in America would no longer be at a disadvantage. By August 2020, with presidential elections looming, officials had worked out the kinks. America published an FDPR which cut Huawei off from American technology—and, in effect, from global semiconductor supply chains.

Big chip companies all over the world stopped shipping to Huawei. The firm's revenues plunged by 29% in 2021. Its popular smartphones disappeared from the market altogether. America had found a new way to crimp adversaries which it perceived as a national-security threat.

It would soon have a chance to test that tool further. In late 2021, as Russia massed forces near Ukraine's border, the White House asked government agencies for ideas about how to respond in the case of an invasion. The Department of Commerce suggested an expansion of the FDPR: America could do to the Russian army what it had done to Huawei. In February 2022 two new FDPRs cut off Russia's military-industrial complex from all American elements of global technology supply chains, as part of a huge package of sanctions put in place by America and its allies.

America says Russian hypersonic ballistic-missile production has been dramatically curtailed for lack of semiconductors, and that Russia has had to turn to Iran and North Korea for supplies and equipment. "Sanctions and export controls are having significant and long-lasting consequences on Russia's defence industrial base," the State Department said in October.

Flushed with success, the White House turned its extraterritorial powers towards China's semiconductor industry. In Washington, strong bipartisan agreement had developed about the threat posed by China. The national-security adviser, Jake Sullivan, outlined the new strategy in a speech in Washington in September 2022. Particularly for foundational technologies like semiconductors America had to "maintain as large of a lead as possible".

The October 7th FDPRs were an attempt to do just that. The new rules are hurting China's domestic artificial-intelligence companies, and its chipmakers. The hurt will increase if allies impose export controls of their own, replacing extraterritoriality enforced through supply chains with more robust, national-level restrictions that are easier to enforce. Japan and the Netherlands, which host two of the most important chipmaking-equipment manufacturers, reached a deal with America in late January. If both create strong controls of their own, China will be firmly barred from advanced semiconductors.

Washington is abuzz with talk of its next "target": what to feed into the FDPR machine? One idea is to take aim at China's biomanufacturing industry, which makes drugs and their components. Another is to go after manufacturing of advanced batteries, particularly those for electric vehicles.

By attempting to cut China off from advanced semiconductors, America is incentivising China to focus on more mature forms of chip manufacturing, where the choke points are weaker and China already has a large share of the market. These sorts of chips are required in great numbers in electric cars and weapons. If artificial intelligence turns out to be less important than the American government thinks it is, incentivising Chinese firms to take greater control over commodity chips may end up looking like a mistake. Technological development is hard to predict. The supply chains and manufacturing processing that underpin semiconductor production are some of the most complex things humans have ever created. America must hope that its apparent recent success in manipulating them does not prove illusory. ■

Presidential nominees

Picking winners

WASHINGTON, DC

A new primary calendar gives black Democrats an earlier say for 2024

ONE OF THE many ways America is exceptional is in how it picks nominees for president. In most other democracies, parties select their leaders quickly through a set of selection procedures with tight rules and minimal involvement from the people. In America voters themselves get to pick who runs for president. They do so via a months-long series of elections held independently by each state's party organisations, with each state lobbying the national party for the coveted first go at casting ballots for the nominees. For decades, Iowa has held that title. But on February 4th, the Democratic National Committee (DNC) handed pole position to South Carolina, previously the fourth state to vote.

Activists have supported a reshuffling of the primary calendar for some time. They claim that letting Iowa and New Hampshire, which votes second, go before more diverse states gives white voters more power. This is accurate; New Hampshire and Iowa are the fourth and fifth whitest states in the country. South Carolina, by contrast, has the fifth-highest concentration of black Americans; they make up 27% of the state's adults, a hair higher

BIDEN
PRESIDENT

Here's the deal

than Alabama's 26%. Given the party's reliance on black voters, a reliably Democratic group, for their national wins, shouldn't it prioritise their say?

The question misunderstands the nominating process. It is not as important to go first as it is for candidates to consolidate support among certain demographic groups and donors. Because South Carolina previously voted fourth, a candidate who polled well with black voters could be confident they would do well later, even if they lagged in Iowa and New Hampshire.

Such a path is precisely the one Mr Biden followed last time around. Bill Clinton also staged a similarly "surprising" comeback in the 1992 election. In fact, aside from John Kerry's ill-fated presidential bid in 2004, every eventual Democratic presidential nominee has won the Palmetto-state primary. The Democrats moving South Carolina from fourth to first position is thus unlikely to change who wins its next presidential nomination. But it may speed up the process. An early signal from the state's black voters may help winnow the field, much as fringe candidates previously dropped out after flops in Iowa and New Hampshire.

The bigger news in the Democrats' rules change thus is the state that has made the biggest jump in the queue: Georgia. Peach-state Democrats in 2020 were slated to vote 32nd, long after they might have played a decisive role in the selection process. Next year, Georgia will go fourth. Since Georgia also has a high share of black Americans—higher even than South Carolina—adding it to the slate of early states will tilt the group's racial composition heavily away from white voters. And though proximate, replacing Iowa with Michigan in the early bunch will significantly decrease the say of white non-college voters, disproportionately represented in the future.

Ahead of the vote on the DNC's rules change the chairman, Jaime Harrison, rose to remark that "Folks, the Democratic party looks like America and so does this proposal." But notably absent from the new bunch of early-voting states are any from the West Coast or mid-Atlantic, the party's two strongest regions. Texas nor Florida, two fast-growing Hispanic-heavy red states, are also absent. And there are no states from the mountain region—Wyoming, Idaho, Utah, Colorado and Montana.

The reality of the primary system is that, even when reshuffled, it is not a great way to pick a nominee. It hands veto power to a group of voters who tend to be more ideologically extreme than the electorate as a whole. The Democratic Party has been arguing over which state should go first in selecting its presidential candidates for decades. It may be worth considering an alternative mode of election. Look abroad and it will see many alternatives. ■

Southern gothic

Murdaugh most foul

WALTERBORO, SOUTH CAROLINA

A murder trial in South Carolina reveals how smalltown power can work

A LONE HOOK dangles where a portrait of Randolph Murdaugh Jr used to hang in the Colleton County courtroom. Murdaugh was the longest-serving prosecutor in South Carolina history, his tenure wedged in between his father's and his son's. This multi-generational legal dynasty was revered in Lowcountry, in the state's marshy south. But now, rather than arguing from the prosecutors' bench, his grandson sits in the defendant's seat, accused of slaying his wife and son. The gilt-framed portrait was taken down for the trial.

Prosecutors allege that as a lawyer at his family's personal-injury practice, Alex Murdaugh stole millions from clients. Some of the accusations he faces are far worse. In 2018, after his housekeeper died by tumbling down a flight of stairs at Moselle, the family's hunting estate, he is accused of pocketing a $4m life-insurance settlement without telling her children.

Then things got messier. In 2019 Paul Murdaugh, Alex's youngest son, took his father's boat for a boozy night-time joyride. The boat crashed into a bridge, killing one of Paul's teenage friends. Her family sued, alleging that the father had enabled the son's recklessness. Their lawyer threatened to call Mr Murdaugh's wife and son to testify against him. A hearing was set for June 10th, 2021. On the morning of June 7th Mr Murdaugh was confronted by his CFO about nearly $800,000 of missing funds. That night his wife and son were found dead outside the dog kennels at Moselle.

The subject of many podcasts

The double murder trial is being held in nearby Colleton County, where the Murdaugh family ties also run deep. Many potential jurors were dismissed for having personal connections to them; multiple judges recused themselves from the case. Mr Murdaugh is being represented by Dick Harpootlian, a current state senator. Even the investigator who checked Mr Murdaugh's hands for gunshot residue at the scene of the crime knew him. When he approached the dog kennels that night, Mr Murdaugh greeted him by name.

In Hampton, the town closest to Moselle, things are awfully quiet. Based on the share of people who claim to be visiting one might think that the county, where one in five live in poverty, has a booming tourism industry. But the few dilapidated businesses—among them an empty barbershop, a dress boutique and a diner dishing up gumbo—suggest otherwise. A woman in a coffee shop says she is just driving through and hasn't heard the Murdaugh name. When she gets up to serve a customer a few minutes later she confesses that it isn't true. "I've got a business to protect," she says. Others refuse to discuss the case. "There are three things I don't talk about: politics, religion and the Murdaughs," an insurance broker says with a wary chuckle.

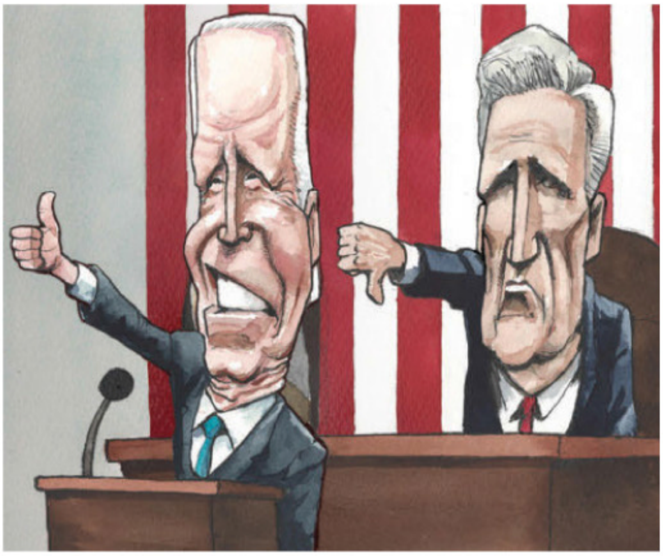
Hampton is a town of 3,000. Many locals work in agriculture and live in trailers off the county highway, coming together for church on Sunday. The black community keeps a list of current KKK members. The Murdaughs' law office, where the accused's brother still works, towers above the other buildings. The firm is the local bank's biggest private customer. According to a retired local, they lost just one case in the past 25 years. Many have been helped by them; others relished their success from afar. "Half of Hampton County is Murdaugh kin," says a town journalist. "Before this the other half claimed to be."

Some strange laws gave the family power. They amassed wealth thanks to a provision allowing personal-injury cases to be tried anywhere in the state. That opened up the chance to argue more cases before favourable local judges. Legal might brought political power. "I'll deliver 2,500 votes for you," Ray Williams, a townie, recalls Mr Murdaugh promising a congressional candidate at a fundraiser. She won. "When Alex tells you to vote for someone, you do," says Mr Williams.

Back in court, prosecutors think they have debunked Mr Murdaugh's alibi. But without forensic evidence the jury may let him off. If he is acquitted, Mr Murdaugh is still accused of over 100 financial crimes. Buster, his lone living son, is in no position to resurrect the family name. He was ousted from law school for cheating. ■

Lexington | Man out of time

The Republican House and Donald Trump are not Joe Biden's toughest opponents



During Donald Trump's presidency, the *Washington Post* kept a running tally of his lies, ultimately counting 30,573 "false or misleading claims" in four years. It has kept up that work under President Joe Biden, finding he lies with less abandon but on occasion with comparable shamelessness.

Fox News is performing its own version of this public service by counting what it calls gaffes, tracking the moments Mr Biden forgets a politician's name, refers to vice-president Kamala Harris as the president or stumbles through a thicket of numbers.

Its approach raises some epistemological questions: why were the misstatements gaffes, rather than lies, when Mr Biden said his home state, Delaware, had no turkeys, which it has, and has the most chickens in the nation, which it hasn't? (In fairness to Fox, even a prepared text is not proof for this president against gaffes: in his state-of-the-union address, on February 7th, Mr Biden demoted Chuck Schumer, the Senate majority leader, to the minority, among other slips and puzzling dad jokes.)

A gentle soul might think Fox, in counting its chickens, was being forgiving because of Mr Biden's advanced age. A cynic would infer cruelty—an effort to boost the gaffe count—for the same reason. And, indeed, in November Fox sounded disappointed at a "slump" to just 11 gaffes during the month, including the two most fowl. "Biden's November gaffe average: the president hits .500", Fox reported (he was closer to .367, if you count weekends).

The gaffe is more dangerous than the lie for Mr Biden because it plays to the perception that, at 80, he is too old for the job. Only 23% of Americans say they have "a great deal" of confidence he can manage the White House, according to a poll taken by the Associated Press and the NORC Centre for Public Affairs Research, down from 44% as he took office. Even most Democrats do not want him to run again, though he is clearly preparing to. These harsh views probably feed into, and are reinforced by, a widespread belief that Mr Biden has not got much done. A recent poll from the *Washington Post* and ABC found that 62% think he has accomplished "not very much" or "little or nothing".

That perception is at odds with reality, and Mr Biden seized on his state-of-the-union speech as his best opportunity to make the case for his progress against some of America's biggest long-term troubles: on climate, infrastructure and national security. He pointed to forgotten successes such as rolling out vaccines against covid-19 and underappreciated ones such as sustaining international support for Ukraine. "We're building an economy where no one is left behind," Mr Biden said. "Jobs are coming back, pride is coming back because of choices we made in the last several years."

Yet time is working against this president in more ways than one: Americans will not feel the benefits of his most substantial legislative achievements for years to come. That may explain why, in the *Washington Post*/ABC poll, a majority did not credit him even with having made any progress on infrastructure, despite the $1.2trn he persuaded bipartisan congressional majorities to invest in roads, bridges and electric-car charging stations. And most of the new price controls on prescription drugs that Congress put in place last year—a Democratic grail for more than 20 years—will not be felt until at least 2026.

The state-of-the-union performance gives this president his best chance to shine. Gaffes aside, Mr Biden also deftly ad-libbed, pivoting when Republicans booed him for saying some of them wanted to cut entitlements to box them in. "As we all apparently agree, Social Security and Medicare is off the books now," Mr Biden said, smugly. "We've got unanimity." He called on everyone to "stand up for seniors"—which they did.

Mr Biden is at home in the Capitol, among fellow legislators. The days when he could be an electrifying speaker are gone, but at the lectern in the House chamber—hands clasped prayerfully, voice descending to a husky, insistent whisper—he is a confident, reassuring one, a familiar elder performing a time-honoured national ritual in the time-worn manner.

Trial balloon

Mr Biden's calls for unity and bipartisanship also once sounded like echoes from the past. But he has proved such appeals still have political force, and he managed to draw bipartisan ovations during his speech, including for a call for police reform. In a hopeful development, House Republicans shelved a plan to pass a resolution before Mr Biden's address criticising him for not having acted faster to shoot down a Chinese balloon that crossed America, apparently gathering intelligence. Instead, they are now pursuing a bipartisan resolution aimed at China. "I think our greatest strength is when we speak with one voice to China," the new Republican House speaker, Kevin McCarthy, told reporters.

As Mr Biden spoke, Mr McCarthy's heavy-lidded presence over his left shoulder, in place of the Democrat Nancy Pelosi, was a reminder of how much the political terrain has changed. That will probably be to Mr Biden's advantage if he runs for re-election. Republicans are divided over foreign and domestic policy, and, given his narrow majority, Mr McCarthy will struggle to impose coherence on their agenda, let alone to moderate the demands of his extremists. Some ignored his caution to behave with dignity during Mr Biden's speech, and their heckling made them seem small.

But the period of Mr Biden's presidency that played to his strengths as a legislator is largely over. He said recently he has created an "Implementation Cabinet", a body composed of members of his cabinet "whose job is to just do nothing but let people know what we have already done". Their time would be best applied to making sure that Mr Biden's giant investments are well spent. If they are, whether Mr Biden is re-elected or not, history may judge this presidency as transformational. In that sense—the one that matters—time could ultimately be on his side. ■

TOD@S QUEREMOS PAZ
ANGEL DE PAZ
PROSPERO RICO
LA PAZ HAREMOS BIEN
ES TAREA DE TOD@S
PAZ
PAZ
PROSPERIDAD
Seguridad Acropolis

Colombia

The revolutionary v the pragmatist

BOGOTÁ AND TIERRALTA

Can Colombia's mercurial president bring "total peace"?

At Hacienda Pontevedra, a remote ranch in the coastal department of Córdoba, a few *campesinos* (small-scale farmers) are camped out in a copse. The ranch once belonged to a drug-trafficker who is locked up in an American prison. But he has agreed with the government of Gustavo Petro, Colombia's first avowedly left-wing president, to hand over 1,200 hectares (3,000 acres) of land to 100 landless *campesinos* who had been growing coca in a national park near Tierralta, the unofficial capital of southern Córdoba.

The *campesinos* have 32 cows, many hopes and a contract with a government agency which gives them around $7,700 per family to get going. This is a historic achievement, says Cervelion Cogollo, their leader. "We are very happy." But, he goes on, "we won't feel fully safe until there is total peace in the whole of Colombia."

That is what Mr Petro has promised. Colombia has had liberal governments before. But none has been so openly left-wing. Mr Petro, who was narrowly elected last year, divides opinion. For his supporters, his victory represents a historic opportunity to achieve social justice in a country that has suffered half a century of internal conflict, partly over land, and from organised crime linked to drug-trafficking. His critics fear a weakening of the rule of law and economic setbacks.

Mr Petro's plans are ambitious. As well as land reform, of which Hacienda Pontevedra represents the start, he proposes "total peace" with Colombia's many illegal armed groups. He also champions an abrupt shift to green energy and radical reforms of health care, pensions and labour laws. The president governs partly by Twitter. His cabinet is an uneasy mix of activists and more centrist figures.

As a young man Mr Petro was a member of M-19, a nationalist guerrilla group. He was a political activist, not a commander: he never fired a shot. But he was arrested and, he says, tortured. M-19 moulded his political identity. His 16 years as a member occupy almost half of his autobiography published for the presidential campaign. It linked him to Latin America's revolutionary tradition of populist nationalism. He went on to embrace Hugo Chávez, Venezuela's autocratic president, as a friend.

→ Also in this section

28 Lula goes to the United States

Even now, aged 62, Mr Petro courts controversy. During the campaign he said Colombia suffered from "three poisons": cocaine, oil and coal. In December he claimed that spending on motorways was a waste of money and that they "are only useful to import products and kill off national production" to the benefit of "the owners of big capital". But Mr Petro has also long been a pragmatic politician. He was elected as a local councillor even while in the M-19. He spent 20 years in Congress and was mayor of Bogotá. Those two sides of him clash.

Two sides of the same coin

Take his handling of the economy, which is likely to determine the success or failure of his presidency. Iván Duque, his weak conservative predecessor, was shaken by violent protests in 2019 and 2021, the second wave over an attempt to make more Colombians pay income tax. Faced with the pandemic, Mr Duque ramped up spending, triggering inflation. The central bank was slower than others in the region to raise interest rates. The result was a wildly overheated economy and still-rising inflation (see chart 1 on next page). The economy will see little or no growth this year.

Mr Petro's finance minister, José Antonio Ocampo, is an academic of the centre-

▶▶

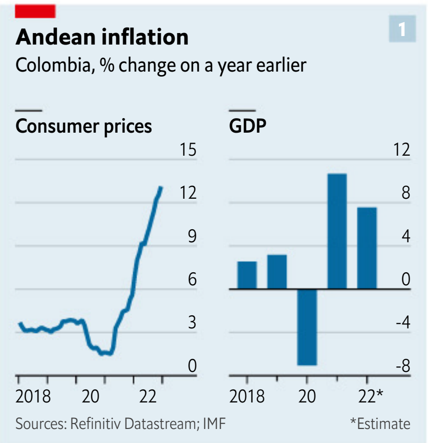
left. By negotiating with conservative groups, he steered a tax reform through Congress which will raise an extra 1.3% or so of GDP per year. That, Mr Ocampo says, will allow the government to pay for Mr Petro's social programmes while also carrying out a necessary fiscal squeeze. The extra burden of the tax reform falls mainly on oil, gas and coal, and on the rich.

During his campaign Mr Petro alarmed investors by promising to halt all new exploration of oil, gas and coal, which between them provide around 40% of Colombia's goods exports and a big chunk of government revenues. The energy and environment ministers are both activists who favour this. Critics say it would make the transition to cleaner energy harder. The problem is that without a big increase in the output of natural gas, of which Colombia probably has a lot, revenues will be lower and costs, and perhaps emissions, will be higher. It makes more sense to produce gas locally than import it as liquefied natural gas, as the government suggests, which would require building ports and new transport facilities.

To meet its target under the Paris agreement of cutting carbon emissions by half by 2030 and to become carbon-neutral by 2050 Colombia needs to double its natural-gas production and expand electricity output fivefold by 2040, says Tomás González, a former minister of energy. Rather than halt exploration for gas, he argues that the government should move faster to cut subsidies on fossil fuels, which Mr Duque allowed to balloon. Last month Mr Petro said he would sideline the independent regulatory agencies that set energy tariffs.

Mr Ocampo insists that private and public investment in gasfields will continue. He sees natural gas as an important driver of future growth, along with tourism and non-oil exports, especially to Venezuela, with which Mr Petro has restored diplomatic ties. "My role as minister is to give confidence to the private sector," he says. "There will be no nationalisations." Not everyone is reassured. "Businesspeople are not planning to leave, but they are not planning to invest more," says Jaime Alberto Cabal, who heads Fenalco, the chamber of commerce. He complains that tax increases and a new 40% import tariff on clothing and shoes will hurt jobs.

Another controversy concerns Mr Petro's proposed health-care reform. Colombia's constitution of 1991 created a universal insurance-based system with subsidies for poorer people, as in France or the Netherlands. The president and his health minister want to replace it with a public, taxpayer-financed scheme. The existing system has problems, such as a lack of competition. But it works. "No Colombian had to sell their home or car to pay covid bills, unlike in the United States," says Roy Barreras, the president of the Senate. The publicly subsidised private health providers handle 1bn receipts a year. Abolishing them risks chaos. Mr Barreras, an ally of Mr Petro, says that he will work to reform the existing system rather than scrap it.



Andean inflation

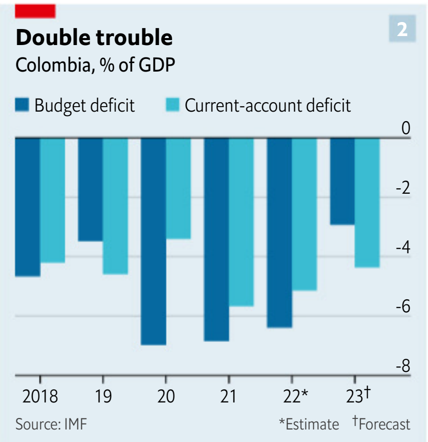
Colombia, % change on a year earlier

Sources: Refinitiv Datastream; IMF

Mr Petro also wants to abolish the private funds that manage workers' pension contributions, rather than supplement them with a public scheme. Uncertainty about his plans hit the peso, which depreciated by 18% against the dollar between Mr Petro's inauguration in August and November 7th, a low, though it has since recovered by 8%. The economy is vulnerable to market sentiment. Colombia suffers from twin deficits (see chart 2).

Recently Mr Petro has talked up his idea of "total peace". Colombia has had two big peace deals this century. Under an accord with Álvaro Uribe, a conservative president, about 30,000 right-wing paramilitaries laid down their arms between 2003 and 2006. Mr Uribe expanded the security forces and inflicted blows against the Revolutionary Armed Forces of Colombia (FARC), the largest left-wing guerrilla group. As a result, Juan Manuel Santos, his successor, reached a peace deal under which 13,000 members of the FARC demobilised in 2016.

The hope was that peace would allow the state to extend its writ to Colombia's lawless geographical peripheries, where it is largely absent. Violence did diminish, but then ticked up again. There are two reasons for that. The first is that the cocaine trade continues to be more lucrative than civilian life, prompting turf wars. The second is that the peace agreements were either incomplete or not fully implemented. Mr Duque opposed the accord from 2016, and only partly executed it. Security got worse under Mr Duque, whose policy focused on going after the commanders of armed groups and trying to eradicate coca. It was dogged by his government's politicisation of the armed forces, setting commanders against each other, and by poor co-ordination. There was a net increase in coca cultivation on his watch.



Double trouble

Colombia, % of GDP

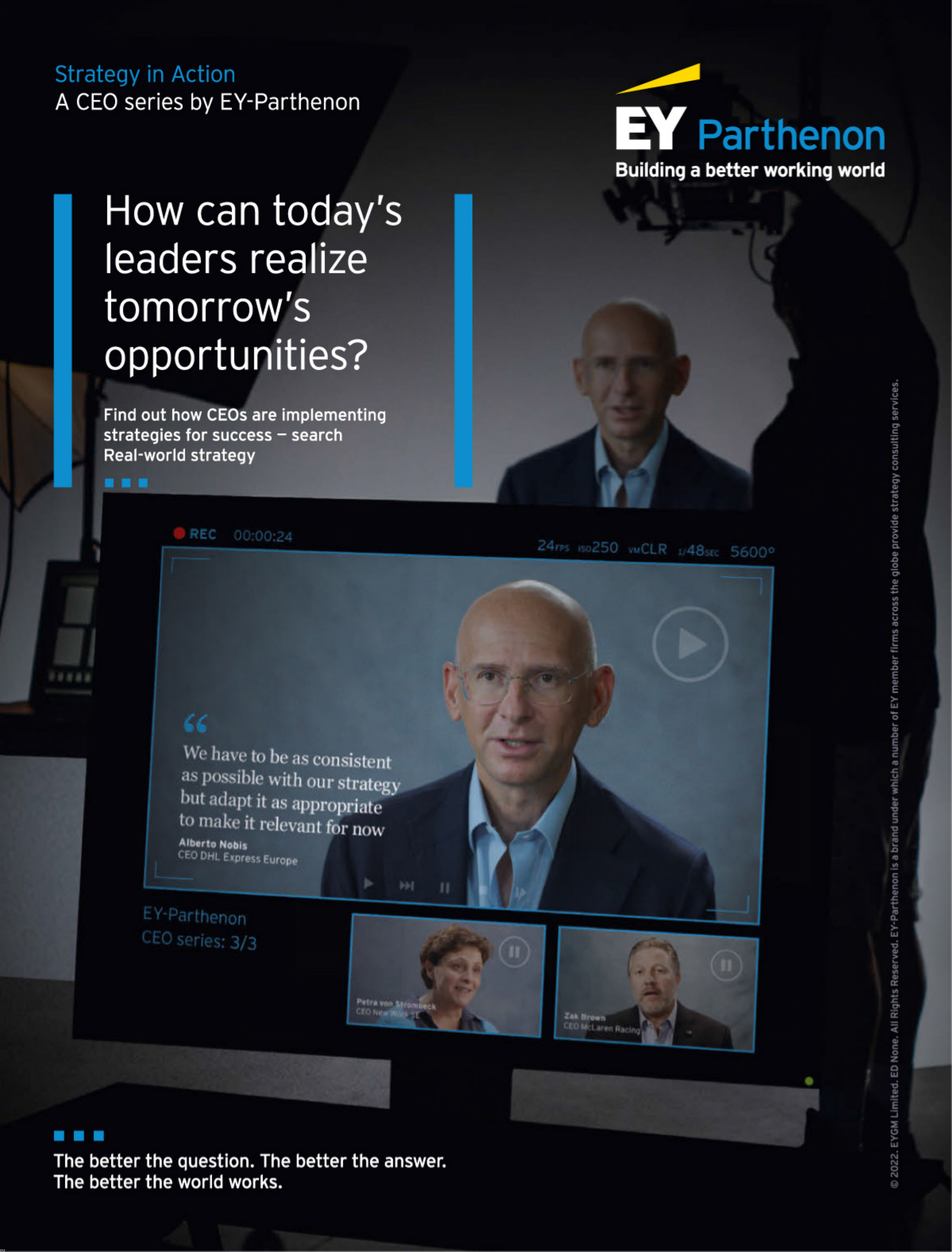
Source: IMF

And with the exception of 2020, the year of lockdowns, the murder rate crept up. Victims of massacres (defined as killings of three or more people) increased from 38 in 2016 to 162 in 2020. Incidents of forcible displacement of civilians and killings of community leaders all rose sharply, too. The pandemic, which closed schools for 17 months, lead to an increase in recruitment by illegal armed groups, notes Elizabeth Dickinson of Crisis Group, a watchdog. They include the ELN, another guerrilla group; outfits formed by dissident commanders from the FARC; the Clan del Golfo, the largest drug gang, and smaller trafficking groups. Their numbers more than doubled between 2016 and 2021 to 6,700, according to the defence ministry.

Healing old wounds

Mr Petro has offered talks and a "bilateral ceasefire" to all illegal groups, be they politically inspired or merely criminal. Several, including the Clan del Golfo, have accepted. In November the government began peace talks with the ELN in Caracas. Five previous governments tried and failed to reach an accord with the ELN, a group inspired by Cuba's communists, run by pernickety old men. Although the ELN has yet to sign up to the ceasefire, this time talks may succeed. The ELN controls territory on both sides of the border between Colombia and Venezuela. It has operated with the consent of Venezuela's dictatorship. But Nicolás Maduro, Venezuela's president, "is interested in being seen as a peacemaker," says a senior Colombian politician who has dealt with him. "The ELN has become a problem for his own forces."

Far trickier are talks with the drug gangs. Take Córdoba, where the paramilitaries began in the 1990s and where their peace talks with Mr Uribe's government were held. "The Clan del Golfo controls Tierralta," says Andrés Chica, who heads a human-rights organisation in the town. They run everything, from the meat trade to taxis, in addition to the drug business. Many political leaders in the department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CEO DHL Express Europe
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are their allies. They kill community leaders who cross them. “I am very uncertain,” says Mr Chica, about the possibility of peace talks with them. “People are scared.”

So far “total peace” is a work of improvisation. Mr Barreras says he will introduce a bill that would provide a legal framework for talks with drug-traffickers who have no political status, offering reduced sentences provided they dismantle their networks. But it would not offer impunity.

More radically, Mr Petro has come close to calling for the legalisation of cocaine. In the absence of an international agreement on this, however, his government is refocusing its drug policy, putting more effort into interdiction and less into eradication of coca. The idea is to act “against the big proprietors of the drug business rather than against the weak links of the chain,” says Iván Velásquez, the defence minister. This means hitting “the owners and their assets” rather than coca growers.

That will take time. Meanwhile, security analysts worry that there is a disconnect between the policy of “total peace” and the government’s military strategy. “None of the armed groups will give up anything significant unless they are under military pressure,” says Ms Dickinson. The first action by Mr Velásquez, who is a former prosecutor with no security experience, was to purge almost 50 generals from the armed forces and the police. He says he was implementing Mr Petro’s instruction to clear out those accused of corruption or abuses. Critics think the purge has deprived the security forces of knowledge and experience.

Mr Petro’s team talk of the need to build a broad coalition for peace. Perhaps surprisingly, Mr Petro has forged cordial relations with Mr Uribe, with whom he fought for years, as well as Mr Santos. He has included the leader of the cattle ranchers in the team talking with the ELN. And he also struck a deal with the ranchers, long seen as close to the paramilitaries, under which the government will buy the 3m hectares of land it proposes to redistribute.

Mr Petro remains fairly popular and, for now, has a legislative majority. But how will he behave if he loses these assets? Some detect narcissistic and megalomaniac traits in his personality. He is intelligent, as he says several times in his autobiography. But he can also be dogmatic. His personal behaviour is erratic: he sometimes turns up hours late, or not at all, to official events. One big fear is how he will react if he is frustrated. In those circumstances the reflex of the populist is to lash out against institutional restraints. Colombia’s political institutions and traditions are fairly strong. “It’s a confused government, but not a threatening one, or at least its threats are not credible,” concludes Fernando Cepeda, a former minister. Others are not so sure of that. ■

US-Brazil relations

Friends with benefits

SÃO PAULO

Lula will try to keep both the United States and China happy

In the early 20th century the Baron of Rio Branco, Brazil’s foreign minister, vowed to make the United States the country’s main ally and trading partner. Today that second role is occupied by China, which buys more than a quarter of Brazilian products. Last year Brazil’s goods exports to China were worth a whopping $89bn. But Brazil’s northern neighbour remains deeply important. On February 10th, after we went to press, Brazil’s new leftist president, Luiz Inácio Lula da Silva, was due to visit President Joe Biden in Washington. It will be the first international trip of this term outside Latin America.

Lula (as he is known) has said he wants to discuss, and presumably cement, Brazil’s role “in the new geopolitics” with Mr Biden. But ensuring Brazil’s place in the global order will be a trickier diplomatic feat than it was during his previous two terms as president, from 2003 to 2010.

For a start Lula needs to smooth relations in the wake of Jair Bolsonaro, his right-wing populist predecessor. Mr Bolsonaro, who was a fan of Donald Trump, did not destroy Brazil’s relationship with the United States, but it became somewhat strained under the Biden administration. He was one of the last world leaders to acknowledge Mr Biden’s victory in 2020, along with Vladimir Putin and Andrés Manuel López Obrador, Mexico’s president. Mr Bolsonaro did not care much what foreigners thought of Brazil. Under his watch, deforestation in the Amazon increased, earning him global condemnation.

One ally today, another tomorrow

Lula also faces a tricky balancing act. Brazilian diplomacy is typically neutral. Governments of both the left and the right have tried to stay out of big disputes. During his first two terms Lula tried to expand Brazil’s global influence while remaining in America’s good books.

In 2009 he helped give concrete form to the BRICS, a bloc of emerging economies. He opened 35 new embassies, mostly in Africa and Latin America. Even so, Lula had close relationships with presidents such as George W. Bush and Barack Obama. Mr Obama even quipped: “Love this guy. He’s the most popular politician on Earth.” And the United States is the largest foreign investor in Brazil. Its flow of direct investment has held fairly steady in recent years. In 2021 it was $12bn, more than a quarter of all foreign direct investment in Brazil.

Now that relations between China and the United States are more tense it may be harder for Lula to please both countries. In November Mr Biden announced that the US International Development Finance Corporation would invest $30m in TechMet, a mining company, to process cobalt and nickel in Brazil. This is an attempt to act as a counterweight to Chinese investors. His administration has also signalled that it will support Brazil’s attempt to join the OECD, a club of mostly rich countries, once its environmental policy is back on track.

American foreign policy could also push Lula to take sides. In their meeting Mr Biden may try to convince the Brazilian to openly support Ukraine. In May last year Lula claimed that Volodymyr Zelensky, the president of Ukraine, was “as responsible” for the war as Mr Putin. Last month after a meeting with Olaf Scholz, the German chancellor, in Brasília, the capital, Lula reluctantly conceded that the Russian president “made a mistake” by invading Ukraine. But he refused to send ammunition to the country and criticised the European Union for not doing more to bring about peace talks. By contrast, when Mr Bolsonaro was in office, Brazil condemned Russia’s invasion at the UN security council.

Meanwhile Lula also faces problems at home. He won the election by a mere 1.8 percentage points. A week after Lula took charge, fans of Mr Bolsonaro stormed Congress, the Supreme Court and the presidential palace. Unrest could return. His government needs to pass tough economic reforms to ward off a fiscal crisis.

In the past Lula has used foreign policy as a tool to burnish his popularity at home, says Rubens Ricupero, who was Brazil’s ambassador in Washington in the 1990s. Lula is now planning to do one international trip a month; indeed, he is off to China in March. The trick might not work as well this time. ■

Pakistan in crisis

Broken and broke

DADU, ISLAMABAD, KARACHI AND LAHORE

A balance of payments crisis is tipping a fragile economy over the edge

PAKISTANIS ARE accustomed to unreliable utilities. Even in affluent neighbourhoods of Karachi and Lahore, residents install diesel generators for power cuts and spare water tanks for when the taps run dry. Yet the events of January 23rd were still shocking. A surge in voltage at a power station in southern Sindh province led to almost the entire country of 230m people losing power for most of the day. Factories, hospitals and mobile-phone networks shut down in many areas. In Lahore, the evening's trading and promenading—a time when Pakistan's second-largest city feels most exhilaratingly alive—was conducted in darkness and a pale glow of mobile phones. Only at midnight did some streetlights come on.

The blackout is indicative of an economic crisis severe even by the standards of a country well-known for them. Pakistan is still suffering the devastating effects of monsoon flooding last summer that displaced 8m people and cost the country an estimated $30bn in damage and lost output. Tens of thousands remain homeless. Rocketing inflation, fuelled by global factors and economic mismanagement, is making their situation harder. Annual inflation reached 27.6% in January, the highest level since 1975. The rupee is crashing. It traded at an all-time low of 275 to the dollar this week, down from 230 in mid-January and 175 a year ago. With foreign exchange reserves dwindling, the country faces its worst balance of payments crisis in peacetime.

Many heavily-indebted emerging markets have faced similar problems over the past year, related to post-pandemic supply glitches and the war in Ukraine. Pakistan, which imports much of its food and fuel, looks a lot like Sri Lanka last spring, before it defaulted on its debt and its president was chased from the country by protesters. Yet Pakistan is uniquely troubling. It is the world's fifth biggest country by population, perennially unstable, beset by extremists and nuclear-armed.

The Taliban's return to power in neighbouring Afghanistan in 2021 has launched a third terrible blight—of terrorism and insurgency, mainly in the north-west of the country. Last week a suicide-bomber killed 84 people, mostly members of the security forces, in a mosque in Peshawar, a north-western city. Political dysfunction, which is as ubiquitous as corruption in Pakistan, is inevitably stymying the government's response to these disasters.

Imran Khan, a charismatic narcissist who was ousted as prime minister last April, has spent the past year agitating to bring down the government of Shehbaz Sharif, who replaced him. Even if he fails (and the army, which often stage-manages Pakistan's political dramas, is not with him) Mr Khan remains popular and well-placed for an election due by October. Mr Sharif's administration is meanwhile squabbling, including over negotiations for an IMF bail-out. With foreign currency reserves down to just over $3bn in early February, enough to cover three weeks of imports, Pakistan needs access to $1.1bn in a bail-out programme agreed with the IMF ▸▸

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in 2019 and suspended due to a lack of progress on promised reforms. If the fund's negotiators, who returned to Islamabad on January 31st, leave this week without a deal (which looked possible as *The Economist* went to press), Pakistan could default on its sovereign debt.

The forex shortage, in part caused by efforts to prop up the rupee, is causing additional damage. Import restrictions imposed to save dollars for essential items like food and fuel have hit industries reliant on imported inputs. Output in large-scale manufacturing, including cars, chemicals and textiles, fell by 5.5% in November 2022 compared with the year before. The World Bank predicts GDP will grow by 2% this year, half what it forecast last June. "There used to be this conviction that we'll always come out of it somehow," says a businessman in Karachi. "Now there's deep pessimism, almost hysteria."

The almost total loss of the cotton crop to the floods has ravaged the textile industry, a major source of exports. Some 7m textile workers may have lost their jobs since last summer, according to industry sources. The blackout is estimated to have cost the industry an additional $70m.

The floods and job losses are thought to have pitched between 8.4m and 9.1m more people into poverty, mostly in the countryside. In Dadu, an especially inundated district of Sindh, thousands are still languishing in tents. "Only those who had savings or outside help can afford to fix their houses", says Rasheed Jamali, an aid worker. Foreign donors pledged $9bn in relief in January; less than $800m of a previous set of pledges had at that time arrived. With only half of Pakistan's soggy fields sufficiently recovered to sow with winter wheat, much of the country is facing another lost harvest.

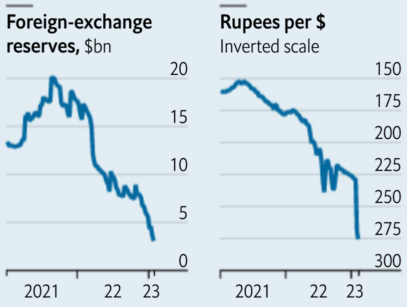
These political, economic and environmental crises are mutually reinforcing. Payments from the bail-out programme agreed in 2019 were suspended a year ago after Mr Khan, facing a growing prospect of parliamentary defeat and ejection from office, reintroduced fuel subsidies. Mr Sharif's government vowed to fulfil the fund's conditions but backtracked in September when, panicked by the floods, it sacked Miftah Ismail, its pragmatic finance minister. His successor reversed some of his policies, prompting another suspension of payouts. "If the floods hadn't happened I might have kept the job and we might have been OK," Mr Ismail says.

Mr Sharif's government seems to be bowing to the inevitable. In late January it stopped trying to prop up the rupee and raised fuel prices, as the IMF had requested. If the current negotiations in Islamabad unlock the bail-out funds, it might encourage other external creditors to extend credit lines or defer payments on existing loans. Unlike Sri Lanka, which owed a higher percentage of its debt to foreign creditors, Pakistan may be able to stabilise its position without its creditors being forced to accept a "haircut".

Yet any relief is likely to be temporary. The current IMF programme expires in June; Mr Sharif's term will expire in August. A caretaker administration will then preside over what promises to be a two-month political vacuum before the scheduled elections. They will be messy. It is hard to think of Pakistan in such circumstances carrying out the additional reforms, including raising taxes and electricity tariffs, required to secure more IMF funding. They would inflict more short-term pain on the country's suffering people than even an astute Pakistani government might dare to. And especially if Mr Khan, currently nursing his wounds after a failed assassination attempt, has his way, the next government may be even worse than the current one. ■

Dollar dolours

Pakistan



Sources: State Bank of Pakistan; Refinitiv Datastream

Indian cricket

Women at the crease

MUMBAI

Indian investors pile into women's cricket

ON FEBRUARY 12TH India's women's cricket team will play their Pakistani arch rival in the Women's T20 World Cup in South Africa. It will be a big sporting occasion. It will also be a potentially lucrative opportunity for the players to show off their skills ahead of an enthralling cricket-business event back home in Mumbai the next day.

India's cricket administrators will hold a player auction for the inaugural Women's Premier League (WPL), a domestic contest to be played in Mumbai from March 4th to 26th. If the men's version of the tournament, the Indian Premier League (IPL), is a guide, the televised auction will be almost as popular as cricket itself is in India. And the bidding, to allocate players and determine their wages, will be fierce. Top Indian players can expect to earn as much from a three-week WPL stint as they do in a year with the national team. Foreign players will also be up for grabs. It would be "naive to think that it's not going to be a distraction," said Sophie Devine, New Zealand's cricket captain, ahead of the World Cup.

The IPL, launched In 2008, has had a seismic effect on cricket. A made-for-TV tournament, it has been a huge commercial hit. Five-year television and streaming rights to the IPL sold last year for a combined $6.2bn, making it the second-most valuable sports franchise by media rights. The league has, among much else, greatly increased the sums top cricketers earn. There are hopes—and some concerns—that the WPL will have a similar effect on the women's game.

The numbers involved in the WPL are already impressive. Broadcast rights for its first five annual seasons sold last month for 9.5bn rupees ($115m). A few days later, investors paid a combined 46.7bn rupees—over half a billion dollars—to own five franchise-based teams. Before a ball has been bowled, this suggests the WPL may be the second-most valuable women's sports franchise behind America's biggest women's basketball league, the WNBA.

The concerns, again fuelled by the IPL's example, relate to the possible effect of the WPL on the women's game at large. The lure of fat contracts might incentivise players to quit their national teams in favour of the WPL. This is an especially sensitive issue in cricket, which has been largely organised around international contests ever since the first (between America and Canada) was held in 1844. The IPL has significantly eroded their primacy in men's cricket; little international cricket is played during it.

Yet this may be a lesser worry in women's cricket, given that its contests attract far few viewers than their male equivalent. And merely to see a women's enterprise drawing such attention in India is positive. Just 19% of Indian women aged 15 or older are in work, a lower portion than in Pakistan or Bangladesh. If the WPL encourages Indian parents to be more ambitious for their daughters, it will in one important way be a success.

Japanese emigration

Arubaito abroad

TOKYO

Young workers are seeking higher wages overseas

Ashihara Marina, a 25-year-old from Kanagawa, near Tokyo, wanted to see the world. Last April she seized the opportunity to migrate to Australia through its government's "working holiday" programme, which affords one-year visas to under-31-year-olds. She spent four months working on a farm in eastern Australia and now works as a barista in Sydney. What started as an adventure has found an economic logic. The minimum wage Ms Ashihara earns is, at A$21.38 ($14.9) an hour, twice as high as Japan's. Even working part-time, she makes more than she did toiling as a lowly office lady in Tokyo.

Ms Ashihara is one of growing number of Japanese drawn to work abroad. Japanese applicants for Australia's working holiday visa more than doubled in 2022. A recruitment platform called Indeed reports seeing record numbers of searches for overseas jobs. Study abroad agents have started advertising the term *dekasegi ryugaku* ("earning money while studying overseas"). "You could be doing the exact same job as in Japan and earn twice as much in another country," says Hirawatari Junichi, a career consultant. "More and more young people have become interested in earning money in a stronger currency".

The historically weak yen is probably fuelling the trend. So, more troublingly, is the longer-term problem of Japanese wages, which have hardly increased in three decades. The average annual wage in Japan is $39,700, well below the OECD average of $51,600. In Japan's seniority-based employment system, recent university graduates can expect to earn around ¥220,000 ($1,670) a month.

Young Japanese are understandably pessimistic about their prospects. In addition to low salaries, many are growing increasingly dissatisfied with Japan's rigid, time-serving corporate culture. A survey by the Nippon Foundation, a non-profit, showed that only 14% of young Japanese believe that their country's future will "get better". "Many are struggling because wages are so low," says Furusawa Yuta, 21, who recently moved to Canada to work and save money. When Tsuyuki Sho, 29, who works in IT, noticed how much higher wages were in his industry in other rich countries, he felt a "sense of crisis". He moved to America to work in 2019.

Japan's declining population and acute labour shortage mean it can ill afford any loss of talent. And a bigger exodus could be looming, as the growing frustrations of young Japanese get the better of the poor foreign-language skills and risk aversion that are common to many. Some experts fear Japan could at the same time start losing out to neighbouring countries such as South Korea and Taiwan in the contest to attract the migrant South-East Asian workers that all need. "Japan is losing its attractiveness as a place to work," frets Noguchi Yukio, professor emeritus at Hitotsubashi University in Tokyo.

Life in Japan is still in many ways attractive. Its recent inflation has been much more moderate than elsewhere in the rich world and its housing is more affordable. "I came to America hoping to save lots of dollars, but at one point I was spending all my income", recalls Mr Tsuyuki. He reckons there is no country "that could beat Japan in terms of liveability," including safety and cleanliness. He also misses his excursions to Japanese fast-food chains, which serve tasty meals at pocket-change prices.

Yet affordability is a flipside of the country's economic stagnation. Since the burst of the country's bubble economy in the 1990s, Japan had been stuck in a "deflationary mindset", where firms hesitate to pass on high prices to consumers. Thanks to the falling yen and mild inflation triggered by higher import costs, public frustration with the resultant stagnant wages is at last becoming evident.

Ochiai Yuri, 24, who moved to Australia a year ago, also enthuses about the pleasantness of some things back home: "Everything in Japan is orderly and well-maintained. The trains always come on time and the customer service is great." But she no longer considers returning to her old job in Tokyo—waiting tables on a miserable income—a serious option. ■

Life is all right in America

Uzbekistan

Quashing dissent on the Silk Road

BUKHARA

President Shavkat Mirziyoyev may be preparing to extend his rule

It was a performance straight from Uzbekistan's dark Soviet past. In a courtroom in Bukhara in December, a group of alleged agitators against the government of President Shavkat Mirziyoyev leapt to their feet and, with heads bowed and hands on hearts, issued a synchronised plea for mercy. "We ask for forgiveness," they intoned in unison.

They were in the first of at least two batches of dissidents due to be tried over a spasm of violence last July in Karakalpakstan, an autonomous province in the northwest of Uzbekistan. It started after word spread that Mr Mirziyoyev planned, as part of a package of constitutional changes, to scrap the province's right to self-determination. That sparked peaceful protests which, for reasons that are contested, spiralled into clashes between the security forces and demonstrators that left 21 dead, including 17 civilians, mostly from gunshots and grenades. Mr Mirziyoyev, previously feted as a liberal reformer, promptly abandoned the attempt to curb the province's autonomy. Nonetheless, the violence in Karakalpakstan, for which the government has accepted no responsibility, has left a stain on his presidency.

The trial in Bukhara looked at first like an effort to expunge it. Uzbekistan's criminal justice system was until recently synonymous with corruption, torture and other abuses; in 2002, two prisoners were allegedly boiled to death. Yet, though politically sensitive, the trial was open to journalists. A live video feed of its proceedings, which were carried out in the defendants' Karakalpak language, was initially shared on the internet. A government-appointed commission, including human-rights campaigners, was charged with monitoring the accused's treatment.

Yet the trial looked increasingly for show. The main defendant, a 44-year-old lawyer and blogger called Dauletmurat Tazhimuratov, was the only one to plead innocent; the others all testified against him. Cross-examining one of his accusers, Mr Tazhimuratov forced her to concede that she was, in fact, lying. He was convicted on January 31st of trying to overthrow the state in Karakalpakstan, among other crimes, and sentenced to 16 years in prison. The 21 other accused received lesser punishments; 15 of them received prison sentences of three to eight years. Some were then paraded, weeping, before reporters to

▶▶

express their gratitude to Mr Mirziyoyev. Another 39 alleged ringleaders of the violence went on trial this week.

The Karakalpakstan incident suggests the limits to Mr Mirziyoyev's reform agenda. Since becoming president in 2016 (after his long-ruling predecessor, Islam Karimov, died) he has in many ways improved Uzbekistan. It no longer routinely locks up and tortures political dissidents. It no longer runs, in the country's steppe-land cotton-fields, what was perhaps the biggest forced labour regime outside North Korea. Uzbekistan has become fairer, more open—and also more prosperous. Mr Mirziyoyev has lifted currency controls, launched a privatisation drive and dismantled barriers to regional trade. The country's economy grew by around 6% last year. Yet after the fashion of enlightened despots, he has shown no interest in political reform; except, it increasingly seems, to extend his rule.

Mr Mirziyoyev's second presidential term is due to end in 2026, and is all that the constitution permits him. That appears to be why he is trying to change it. If the 65-year-old president can also pull off a plan to extend presidential terms from five to seven years, he could remain in office until 2040. The violence in Karakalpakstan appears to have been an unforeseen by-product of his effort to do so. And the ensuing crackdown should help enforce it. Mr Mirziyoyev is expected to put all his mooted constitutional changes except the Karakalpakstan one to a referendum this year. They will almost certainly pass; criticising the president is a red line few Uzbeks dare cross. The long sentences being meted out to the dissident Karakalpaks might well appear as a warning to those few. ■

Banyan A sparkle of democracy

Corrupt autocrats are going out of fashion in Asia

THE CHAGRIN of the dozen-odd years of this column's existence is that fair, free and open societies in Asia have for most of that time been on the retreat. The golden advances in Asian democracy were in the 1980s and 1990s, when dictatorships in the Philippines, South Korea and Taiwan fell spectacularly. In recent years freedom has been on the back foot.

Think of the assaults on the judiciary and the press by Rodrigo Duterte, president of the Philippines until last year. Or attempts in Cambodia by its strongman, Hun Sen, to destroy the opposition. Or Narendra Modi, India's prime minister, stoking sectarian tensions and intimidating his critics in the media. Or Indonesia's move to criminalise insulting the president. The main exception to this recent trend, tragically, has ended up conforming to it. In 2015 joyful elections in Myanmar brought half a century of military rule to an end. But in 2021, the generals took back power in a violent coup and threw Aung San Suu Kyi and her government in jail. They have ruled the country through terror ever since.

But, tentatively if hopefully, points of democratic light are re-emerging in Asia. Many expected the rule of Mr Duterte's successor to be just as louche and threatening. Ferdinand "Bongbong" Marcos is, after all, the son of the late kleptocrat whom Filipinos threw out in 1986. Yet Mr Marcos, who became president last June, emphasises good governance. Senior members of his cabinet are capable and pragmatic. He asks to be judged by his administrative performance and, so far, it is not discouraging.

Until July Sri Lanka was descending into a dystopia presided over by the Rajapaksa family, led by Gotabaya, its drill-sergeant president, and his grasping brothers. Then, to Mr Rajapaksa's astonishment, popular protests last year forced him to flee the country and his clan from power. It is early days for Sri Lanka's recovery; but the Rajapaksas' ousting was its essential precondition.

Power changed hands last December in Fiji, bumpily but without anything like the turmoil feared. Its former prime minister, Frank Bainimarama, in power for 16 years following a coup, failed to win re-election and, after thinking about it a bit, agreed to step aside. Malaysia had seen a largely peaceful transfer of power the previous month—one that made Anwar Ibrahim, that oft-foiled reformist, prime minister.

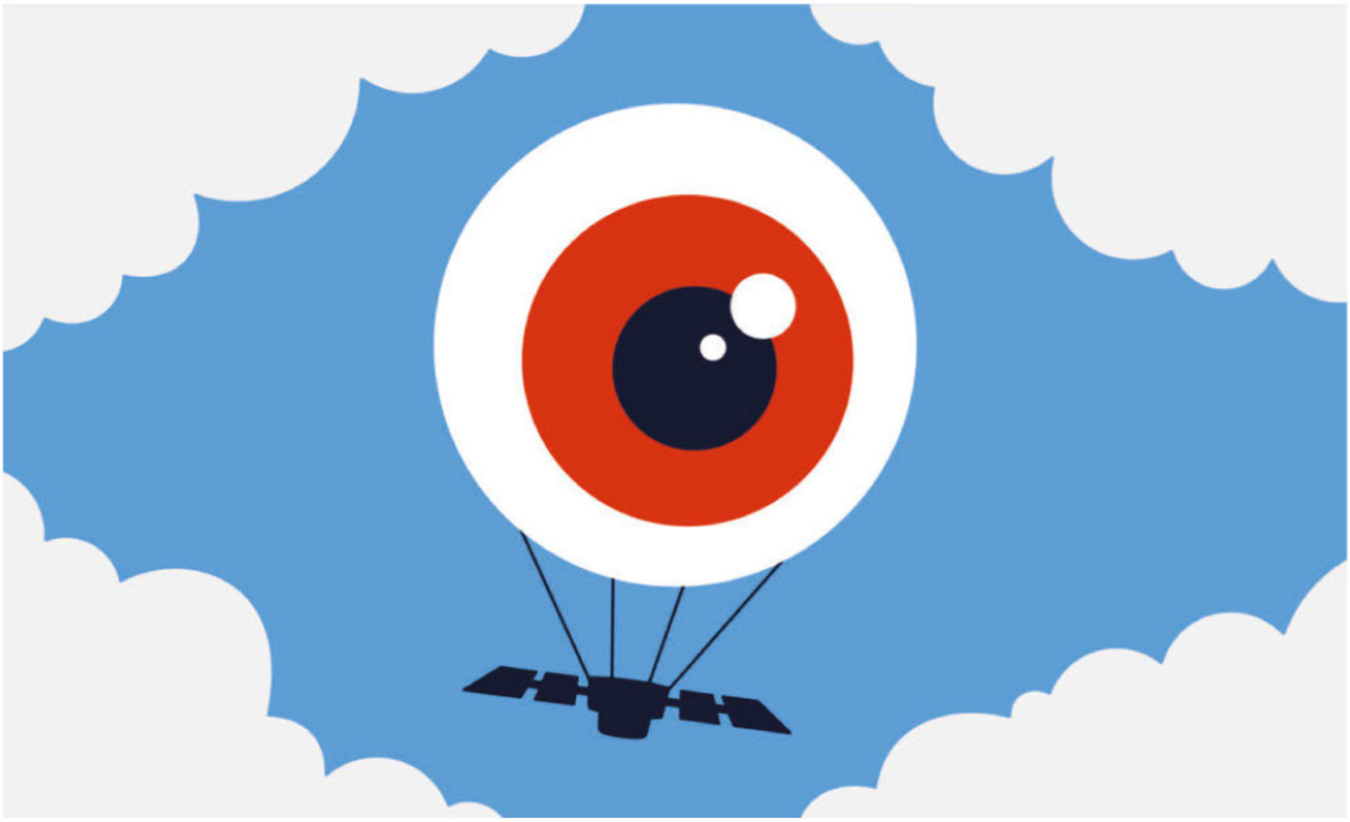
In Thailand, another coup leader, Prayuth Chan-ocha, and his underwhelming cronies from army days now run an ostensibly civilian government and promise elections this year. Their grip is less sure than they would like; a focused, almost joyful opposition is emerging against the "old uncles", as its members mockingly call Mr Prayuth and his team. And though there is little to smile about in wartorn Myanmar, the ruthless General Min Aung Hlaing has inspired a powerful struggle for democracy. Just as in Iran, a generation of young citizens, less traditional and more demanding than their elders, are proving willing to die for their freedoms. Democracy will surely return to Myanmar, eventually.

Points of light are not necessarily a pattern. And, it must be said, vast swathes of Asia are yet to know democracy at all. China, Laos and Vietnam are three of the world's four surviving Leninist dictatorships—and then there is North Korea. Yet the political mood in Asia appears to have changed.

Authoritarianism is on the wane because it has not been delivering the goods. Asian admiration for China's model of governance has been diminished by President Xi Jinping's blunders handling the economy, covid-19 and relations with America. Vladimir Putin's disastrous progress in Ukraine has made the Russian president's fans in Asia squirm. In Sri Lanka, the Rajapaksas were chased out because they had run the economy into the ground.

What is more, many Asian countries have long had the means to get back on track. Westminster-style systems in Fiji, Malaysia and Sri Lanka, though much abused at times, underpinned their return to more accountable habits. For all the backsliding in India and Indonesia, their traditions of free elections offer a route to democratic revival. Elsewhere, corrupt autocrats who hold rigged elections to enhance their legitimacy may sometimes lose control of the process. With elections due in Cambodia in July, even Mr Hun Sen is demonstrating that political opposition, once rashly permitted, is frustratingly hard to quell. His ruling party is not guaranteed to make all the running. The seeds of democratic renewal in Asia lie all around.

China



China and America

An eye for an eye?

Tensions will linger over a Chinese balloon downed by America

The precise purpose of the Chinese balloon that drifted across America, kiboshing a brief detente in the world's most consequential bilateral relationship, has yet to be proven. But troubling answers may soon emerge from the Atlantic. US Navy divers have already started retrieving debris from the airship, which was shot down by an American F-22 fighter jet off South Carolina on February 4th. The divers aim to complete their work within days.

The equipment they find could bolster American officials' assertions that the balloon was part of a fleet of similar craft gathering intelligence worldwide. They say they have already got plenty of evidence from tracking it across America. Yet China is doubling down on its claim that the balloon was monitoring weather and blown off course. And with Chinese authorities now suggesting that they want the debris returned, the two sides seem to be heading for a stand-off that could push them deeper into a cold-war-style confrontation.

In some ways, the saga echoes previous bilateral upsets, including China's testing of an anti-satellite missile in 2007 (first revealed by American officials) and its show of muscle by trying out a prototype of a stealth fighter-jet during a visit to Beijing by a Pentagon chief in 2011. What makes it more dangerous is that both countries' leaders are now facing intense domestic political pressure to stand up to each other. Their armed forces are already gearing up for a potential conflict over Taiwan.

At first, a relatively quick resolution seemed within reach. Before the balloon was shot down, China expressed regret and said it respected the White House's decision to postpone a visit to Beijing by Antony Blinken, America's secretary of state, that was due to start on February 5th. That briefly held out the possibility that the two sides could manage the crisis and reschedule the visit, which was supposed to consolidate the detente since Presidents Joe Biden and Xi Jinping met in November.

But China's rhetoric later hardened. Its foreign ministry expressed "strong dissatisfaction", accusing America of over-reacting and violating international practice. It pledged to safeguard the interests of "relevant Chinese companies" and said it reserved the right to respond. Asked if China had demanded the return of the debris, a spokeswoman said: "The airship does not belong to the US. It belongs to China." The defence ministry threatened to "use necessary means to deal with similar situations".

In America, China hawks are in full cry. Republican leaders, questioning why the balloon was not shot down earlier, originally planned a resolution criticising Mr Biden's response but have since pivoted to a bipartisan one condemning China's balloon escapade. "I am committed to work with China where it can advance American interests and benefit the world," Mr Biden told Congress on February 7th. "But make no mistake: as we made clear last week, if China threatens our sovereignty, we will act to protect our country."

Some observers shrug off the episode, noting that China already has a formidable array of spy satellites. In China, there are experts with their government's ear who

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suggest the Biden administration is hyping the issue to out-hawk Republicans ahead of a presidential election in 2024 and to mobilise public support for a long-term confrontation with China. "If the public does not support you, how can you engage in a new cold war?" says Jin Canrong of Renmin University in Beijing.

But American officials insist that the balloon represents a serious threat. They say China has recently developed a fleet of them to spy, often for the People's Liberation Army (PLA). Although less sophisticated than satellites, the balloons can gather some communication and other data only accessible at lower altitudes, and can often linger for long periods using a small solar-powered engine. They are also far cheaper.

The balloons have been spotted over countries across five continents, including Europe, and have violated the sovereignty of several, the officials say. On February 6th China acknowledged that another balloon, seen over Latin America in recent days, was one of its own but insisted that it, too, was a stray weather-monitoring airship.

Also that day, America's deputy secretary of state, Wendy Sherman, led a briefing on China's balloon espionage for about 40 embassies, according to the *Washington Post*. The newspaper said that American officials believe some of these operations are being run from China's southern province of Hainan and collect military information from countries including India, Japan, the Philippines, Taiwan and Vietnam.

Some of the previous sightings were already public, including one over Japan in June 2020, another over India in January 2022 and a swarm over Taiwan last February that its armed forces linked to the PLA Rocket Force. That month, America scrambled fighters to intercept an unmanned balloon off Kauai, a Hawaiian island with a missile-testing range (the balloon was not identified as Chinese at the time).

But American officials have only revealed in recent days that Chinese government surveillance balloons have briefly transited continental America at least four times before: three during the Trump administration and once earlier in Mr Biden's presidency. Some passed over Texas and Florida and went near sensitive military sites, the officials said.

More worrying still for America, those intrusions were not detected at the time. They were identified only later by intelligence officials using "additional means of collection", according to General Glen VanHerck, commander of the North American Aerospace Defence Command. "That's a domain-awareness gap that we have to figure out," he said on February 6th.

This time, however, American forces spotted the Chinese balloon as it approached Alaska. That allowed them to ensure that no sensitive activities or communications were exposed nearby, and to monitor it closely and try to assess its ability to gather and transmit data. One finding that American officials say undermines China's claims is that the balloon appears to have manoeuvred itself over military sites, including a base in Montana with intercontinental ballistic missiles.

The American navy divers now hope to gather further evidence from the wreckage of the balloon, which was about 200 feet (61 metres) tall and carried kit roughly the size of a regional passenger jet. Counter-intelligence specialists have joined the search for the debris, which is spread across about three-quarters of a square mile (195 hectares) in waters less than 50 feet deep.

It is unlikely that they will find anything labelled PLA. China's balloons are thought to carry a wide range of sensors, including some that gather meteorological data. But that data can be used to help track or guide weapons including ballistic and hypersonic missiles. And there could be incriminating kit such as electro-optical cameras or sensors that "sniff" for nuclear isotopes in the atmosphere. Some of it might even include Western dual-use technology (despite American-led efforts to stop it, China still acquires plenty).

There may even be evidence of involvement by a Chinese civilian entity. Yet that would do little to allay American concerns. Mr Xi has in recent years ordered the civilian sector to play a greater role in national defence through what China calls a "military-civil fusion" programme. Much of China's research on high-altitude balloons appears to have been done by the civilian Chinese Academy of Sciences. Any of that organisation's equipment or data has to be made available to the PLA if requested.

What happens next will depend partly on what American officials learn from the debris and what they choose to reveal. It will also be determined by China's response, especially if it makes good its threat of reciprocal action. As for Mr Blinken's trip, it is unlikely to be rescheduled before the annual session of China's parliament, which starts on March 5th. "The big issue is what is Xi Jinping telling his colleagues," says Drew Thompson, a former Pentagon official now at the National University of Singapore. "Is he telling them, stop fussing about this and move on?"

America and its allies have many other questions. If Mr Xi approved the balloon's mission, how does that tally with his recent diplomatic charm offensive? If he did not, then how come it went ahead? If it was an accident, why didn't China promptly tell America? And if a civilian company was responsible, why not identify it and provide some details? After the balloon was downed, China refused to take a call from America's defence secretary, Lloyd Austin. Answers will be slow to come. ■

Repression in Hong Kong

Gunning for the HK47

HONG KONG

The territory's biggest national-security trial has begun

IS IT A threat to a country's security if opposition politicians try hard to win at the ballot box? In Hong Kong it might be deemed so. On February 6th the trial began of 47 activists and former lawmakers. Their alleged crime was to stage an unofficial primary vote ahead of elections that were due to take place in September 2020. Their aim: to pick candidates capable of winning a majority in the legislature, despite a system rigged against them.

This is the largest trial in Hong Kong involving a draconian national-security law that was imposed on the territory in June 2020 by the government in Beijing in order to crush dissent. The accused failed in their plot to win. The chosen candidates never made it onto the official ballot. Instead the primary's organisers, including veterans of the territory's protest movement such as Joshua Wong and Benny Tai, were arrested for subversion under the new legislation.

The prosecution's case sounds like a description of how, anywhere else, opposition politicians might be expected to operate. The 47 are accused of being "well organised" and intending to "weaponise" their intended majority by voting down the government's budget and forcing the resignation of Hong Kong's then chief executive, Carrie Lam. Their actions had seemed legal under the territory's existing laws, but the new legislation took effect days be-

47
#SAVE47
DON'T LET THEM DISAPPEAR

A rare one who dares

fore the primary. For the government's critics, it changed everything.

Despite initial suggestions that it would be used sparingly, there have been 227 arrests and 135 charges under the security law, according to a database maintained by Eric Lai of King's College London. Some of the alleged crimes are piddly, like wearing a forbidden T-shirt.

The government's biggest concern about the 47's plan may have been that it could have succeeded. Hong Kong's voting system is, by design, stacked in favour of the government's backers. But in 2020, despite official warnings that the primaries could violate the security law, 600,000 Hong Kongers turned out to vote. That showed strong support for the pro-democracy camp, perhaps even enough to secure a majority in the full elections.

Three weeks later the government postponed the official polls, ostensibly because of covid-19. By the time the rescheduled ballot took place in December 2021 the legislature had been further restructured to give traditionally pro-government voices, such as business lobbies, even greater representation. A law had also been brought in to exclude those not judged to be "patriots". Legislators must now swear an oath of allegiance to the central government.

The security law does not prohibit trial by jury, but allows courts to dispense with that tradition. They invariably do so, instead using a panel of national-security judges, who are picked by Hong Kong's chief executive, John Lee, to reach verdicts.

Hong Kong's judiciary is still "basically" independent, says a barrister involved in national-security trials: the authorities do not directly instruct judges what verdict to reach. Then again, he adds, they do not need to. Under the new regime, the government-appointed national-security judges' tenure is reviewed annually. It seems unlikely that those who show an independent streak would have their time on the bench extended. Nor are liberal judges in lower courts likely to be promoted.

The current trial is scheduled to last for 90 days. The accused face sentences of between three years and life in prison. Thirty-one have pled guilty. Most have already spent the past two years behind bars awaiting trial. Where once defendants were assumed to have the right to bail, unless the prosecution could prove their release poses a danger, in national-security trials the burden of proof is reversed.

Optimists in the pro-democracy camp wonder whether the trial, perhaps involving rousing speeches from the dock, might rekindle Hong Kongers' passion for protest. More realistically, says one, it will simply intensify the chill that has spread across the city since the national-security law was introduced, and the belief that demanding democracy is now foolhardy. ■

Cinema

Seeing red on the silver screen

A hit film named after a famous poem fuels Chinese nationalist fervour

"MY HAIR bristles with anger," young men cry as they leave their red-cushioned cinema seats. "We will feast on the barbarians' flesh…we will drink their blood." They are reciting lines from "Full River Red", a poem believed to be written by Yue Fei, a 12th-century general of the Song dynasty. It is also the title of China's top-selling film over the recent Lunar New Year holiday. The movie has grossed more than 4bn yuan ($590m) since its release on January 22nd.

The film is set four years after the death of Yue, who famously led the Song kingdom's battles against invading Jurchens, whose descendants became known as Manchus. Legend says he was killed in 1142 by Qin Hui, a corrupt Song chancellor who pushed the emperor to negotiate and stop fighting the Jurchens. In Chinese lore Qin is recalled as a *hanjian*, or traitor to one's Han ethnicity, and Yue as the opposite.

In recent years, the Communist Party has drawn on Yue's story to promote patriotism. State media even say that Xi Jinping, China's leader, was raised on tales of Yue's exploits. The movie, by one of China's most famous directors, Zhang Yimou, has aroused vitriolic fervour. Not only have cinema-goers delivered spontaneous recitations of the chilling poem at film screenings. The movie has also prompted an increase in attacks on statues of Qin at tourist sites—a practice that has a long tradition.

The film is about the assassination of a Jurchen envoy in Qin's court. There are twists and turns as characters reveal their hidden loyalties, whether to foreigners or to the Song dynasty. Qin and his lackeys are portrayed as conniving officials who lie, cheat, and kill for power—and betray the ethnic-Han people. The film's heroes are undercover vigilantes who resent Qin's behaviour and infiltrate his court to avenge Yue.

They try to recruit a young commander in Qin's army, Sun Jun, who is torn between obedience to his traitorous superiors and loyalty to his people. In one scene, Sun cuts a tattoo that says "Serve the nation with utmost loyalty" off his vigilante uncle's back as his uncle shouts that Sun is a flunkey and a "running dog" of foreigners (an oft-used insult among Chinese nationalists today). By the end, Sun turns against Qin. He leads the Han soldiers in a recitation of Yue's poem and expression of their fervent desire to recover lost land. That scene made some viewers cry, according to reviews on Douban, a film website.

"Full River Red" draws on ancient history, but its modern meaning is clear. The poem is a lament that national shame has not been avenged: it talks of retaking lost "mountains and rivers". In case that is not explicit enough, one Chinese family made a video of themselves reciting the poem after watching the film, but replaced its words with modern terms. Let us "feast on American imperialists' flesh" and "drink Han traitors' blood," they chant—and "unify all of China in coming years".

Chaguan | Why China's balloon is not funny

America and China need to learn how to manage a more hostile relationship

CHINA AND America are drifting towards a cold war. Distrust is turning into something far more disruptive: a contest between two irreconcilable powers, each sure that the other is bent on thwarting its rival's core ambitions and interests. The shooting down of a Chinese balloon off South Carolina is a test of whether the two countries have the wisdom and the will to stop confrontations from spiralling out of control. The results so far are mixed.

Viewed optimistically, the downing of China's blimp is a stroke of good fortune: an instructive but low-stakes version of a crisis that could have been much worse. In recent years, Chinese fighter jets and warships have taken scary risks as they harass planes and ships belonging to America and its allies, usually when Western armed forces show the flag or collect intelligence in international skies and seas close to China's shores. Raising the chances of a collision still higher, Chinese commanders have been sending growing swarms of Chinese aircraft to buzz the island of Taiwan.

When an American missile burst the balloon, the main injury was to China's pride. That is in happy contrast with the last known collision between the two countries' military assets, a mid-air crash in 2001 between an American EP3 spy plane and a Chinese fighter jet that left the Chinese pilot dead and 24 American crew members in detention after an emergency landing in China.

Hopeful observers may note that Chinese propaganda has not really stoked public fury about the puncturing of the Chinese airship. The main news outlets have reported the story sparingly. Semi-official media have played it for laughs, mocking America for overreacting to what China calls an errant weather balloon. At the time of writing, China had not demanded compensation and had expressed regret, at least initially. Optimists may hope that American public and political indignation will teach the Chinese army that collisions have consequences. For years, Chinese officers have shunned talks with foreign counterparts about rules for close brushes, growling that safety lies in outsiders staying away.

There is a gloomier way to view this incident, though. In 2001 Congress merely grumbled when the administration of George W. Bush expressed regret over the Chinese pilot's death to secure the EP3 crew's release. In today's Washington, the partisan furies would not be so restrained. China's self-righteous official statements this week took no account of the political pressures on President Joe Biden, as Republicans demanded he destroy the balloon forthwith. Instead, China lodged a public protest when it was eventually downed. For good measure, it accused America of "hyping up" the story, as if a free society could cover up a house-sized enemy balloon visible from the ground.

The tin-eared obnoxiousness of China's messaging has costs. While the balloon was drifting across his country, Antony Blinken, the secretary of state, postponed a visit to Beijing planned for February 5th and 6th. It is said that Mr Biden and his advisers judged the political context too distracting for the candid discussions that Mr Blinken wanted with President Xi Jinping and other officials. The talks were intended to test China's apparent desire to lower bilateral tensions, and to let Mr Xi hear for himself how Mr Biden views the sharpest thorns in the relationship. These include American backing for Taiwan, the Biden administration's efforts to limit China's access to advanced technologies with military uses, and China's support for Russia's war in Ukraine.

This was not intended as a "boy-scout" visit to suggest policy areas where the two sides could "play nicely", says Daniel Russel, a former assistant secretary of state and Asia adviser to Barack Obama's administration who is now at the Asia Society Policy Institute. Instead the aim was to spell out Chinese behaviours liable to ratchet up tensions, and to suggest actions that could lower them. Mr Russel sees the two countries in "uncharted" territory as they feel their way towards a new equilibrium, balancing often-incompatible goals and worldviews with deep economic integration. Mr Blinken's trip was supposed to be a "no-kidding effort to walk Xi through US policy, rather than leave him with whatever skewed interpretation he may get from his own services", says Mr Russel. He hopes that the visit can be rearranged soon.

Some Chinese scholars also hope the talks will be rescheduled. Da Wei, director of Tsinghua University's Centre for International Security and Strategy, insists that China wants to stabilise relations with America. Beyond avoiding conflicts, China seeks normal trade ties and exchanges of people, says the professor. He challenges Western analysts who think China is waging a charm offensive because it regrets its previous hardline policies. Instead, in his telling, China was waiting for the Biden administration to be ready to engage, once America felt stronger domestically and surer of its allies. Mr Da sees this year as a window of opportunity for talks, before American elections in 2024. He pins cautious hopes on "reasonable" officials, business bosses and academics on each side who still seek co-operation. But he has seen few signs of the two countries managing the balloon crisis effectively. "Both in China and the US, there are still some people working for stable bilateral relations, but they are in a minority," he worries.

The need for crisis management

A new cold war would differ from the first one. America and the Soviet Union did little business with each other. By contrast, two-way trade between China and America runs at about $2bn a day. Against that, commerce is not the path to mutual understanding that it was. For one thing, American politicians are growing warier of Chinese investments in sectors from high technology to farmland. In 2020 Chinese-owned firms employed just 120,000 workers in America, a sharp decline. Communist Party bosses call American suspicions "anti-China hysteria". If Mr Xi wants to avoid dangerous collisions, he should answer Mr Biden's calls for a relationship with guardrails. ■

Middle East & Africa

Reinventing the Gulf

A new dawn, a new day

DOHA, DUBAI AND RIYADH

After decades of empty talk, recent reforms in the Gulf are real but risky

LATIN IS RARE in Riyadh, but the phrase *panem et circenses* ("bread and circuses") was the best way one Saudi writer knew to express his misgivings about the state of his country. Muhammad bin Salman, the writer explained, had put his own spin on an ancient idea. The crown prince was taking away the bread, the state handouts that defined the social contract. Meanwhile he had made the circuses themselves a civic duty: go forth and have fun to help build a new Saudi Arabia.

It seemed to be working. The prince was popular, particularly among young people. Yet the writer sensed a contradiction. The kingdom was throwing billions of dollars at diversions, from a dubious new golf tour to a colossal contract for Cristiano Ronaldo, a Portuguese footballer, even as it insisted it could no longer lavish benefits on citizens. But how long could Saudis live on circuses alone?

For decades the six members of the Gulf Co-operation Council (GCC), a club of petro-monarchies, maintained similar social contracts. Oil and gas revenues topped up their treasuries. Citizens reaped benefits in the form of subsidies, handouts and cushy public-sector jobs. Foreigners came and worked only as long as they were useful. The two groups lived mostly separate lives.

No longer. The past few years have been a time of rapid change in the GCC. Saudi Arabia is shaking off many of its social restrictions and opening up to the world. There is talk across the Gulf of pushing citizens out of make-work sinecures and into the private sector. Policies that were unthinkable, from subsidy cuts and new taxes to cohabitation and civil marriage, are being implemented with little fuss.

→ Also in this section

40 America's flagging trade with Africa

The GCC is not a monolith. In Kuwait it feels as if nothing has changed for a generation (to the chagrin of many citizens). With an ocean of natural gas and a tiny population, Qatar is in no hurry to shrink the public-wage bill. But Saudi Arabia and the United Arab Emirates (UAE) have moved fastest. Together they account for more than 75% of the GCC's population and 70% of its $2trn GDP. Their experience will have an outsized impact on the region.

Rulers in both countries reckon this is their moment to have it all. They have serious (if, so far, inconclusive) plans to diversify their economies and prepare for the post-oil era. They want to be global players in diplomacy and business. And they want to keep their citizens happy.

These goals are laudable. They are also in conflict. Diversification means pushing citizens into a private sector for which some are ill-prepared. It also means benefit cuts that punch holes in the paternalistic social contract. To compensate, rulers are pushing new forms of nationalism—even as they pursue plans that require importing crowds of foreigners to a region where around half the population are already migrants (see chart on next page).

These are hopeful but confusing times in the Gulf. Economies and societies are opening, but political life is closing. "It's not healthy for the country not to have a ▸▸

debate,” grumbles one royal. But privately some *khaleejis* (Gulf citizens), young ones in particular, fret that the rush to be diverse and competitive will leave them behind.

The most visible changes are in Saudi Arabia, governed for decades under an austere brand of Islam. Prince Muhammad, the crown prince and de facto ruler since 2017, has loosened its grip. Women were permitted to drive in 2018. Cinemas, banned since the 1980s, reopened the same year. The kingdom now hosts concerts and raves. Alcohol is still illegal but that may soon change, at least in select areas meant to draw rich foreign tourists.

Such changes serve a few purposes. They have made many Saudis enthusiastic supporters of Prince Muhammad. Few miss the *mutawwa*, the once-feared religious police who harassed people for missing prayer times or wearing make-up. They are also lucrative. For decades Saudis had to travel to more libertine Gulf cities like Dubai, or further afield, to let their hair down. Keeping them (and their money) at home is good for the Saudi economy.

This old world is a new world

The social revolution also makes the kingdom more appealing to foreigners. Prince Muhammad has told multinationals to move their regional offices to the kingdom by 2024 or risk losing government contracts. Some bosses still fret about everything from the business climate to the lack of international schools. But the changes have made the move an easier sell.

All of this poses a challenge for the UAE, long the preferred business hub in the Gulf. Consultants fly over to Riyadh for meetings during the week, then back to Dubai for weekend fun. Worried about losing its competitive edge, the UAE has rushed through its own social changes.

Over the past three years it has overhauled family laws that were long governed by *sharia* (Islamic law). Abu Dhabi, the capital, started conducting civil marriages for non-Muslims in 2021. The other six emirates followed suit this February. Since 2020 unmarried couples have been allowed to live together, previously a crime (if rarely punished). Looser alcohol laws make it easier for Muslims to indulge.

Last year the UAE even changed the calendar, abandoning its Friday-and-Saturday weekend (which allowed observant Muslims to attend Friday prayers) in favour of a Saturday-and-Sunday one, better aligned with the rest of the world.

Since 2018 four of the six GCC members have introduced a value-added tax.The UAE will start collecting a 9% corporate tax in June. Income tax is still a taboo subject, but few expect it will remain so. The Gulf's social contract meant zero taxes for citizens and expats. That is no longer the case.

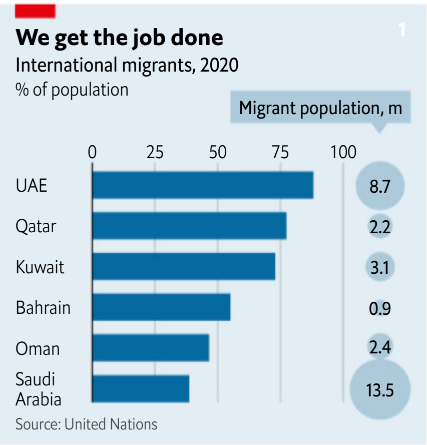
Life is getting more expensive in other ways, too. The UAE got rid of fuel subsidies in 2015. Petrol is still cheap by global standards, but it is 30% more expensive than in Saudi Arabia and almost 150% costlier than in Kuwait. Most Gulf states have raised power and water prices that were once well below market rates. Oman, which had not changed its electricity tariff for 33 years, did away with a discounted rate for citizens: they now pay the same as expats.

Such changes have had a real impact. The 2012 Saudi budget projected that non-oil sources would contribute less than 8% of total revenue. A decade later, even with sky-high oil prices, that figure was up to 31%. For citizens, higher taxes and lower subsidies have made life more difficult.

Foreigners feel pinched, too—yet they are still flocking to the Gulf. The UAE is experiencing a boom as everyone from rich Russians to cryptocurrency entrepreneurs rushes to set up shop in Dubai. It has low inflation, a stable currency and plentiful sunshine. A “golden visa” scheme introduced in 2019 grants long-term residency to skilled professionals and rich investors without the need for a local sponsor. In 2021 the country announced that it would offer citizenship to select foreigners.

Abdulkhaleq Abdulla, an Emirati political scientist, calls this the “Gulf moment”. While the rest of the Arab world seems to be in terminal decline, the GCC is prosperous and well-governed. Citizens might grumble about parochial issues, but there is little demand for political change. “The reservoir of trust here is just full,” he says. “And it doesn't come out of nowhere, it comes out of a solid, 50-year record of good governance. It doesn't have to be democratic. They deliver.”

The question, as Gulf states try to transform their economies and societies, is whether they can preserve that trust. One concern, usually voiced by Westerners, is that openness will prompt a conservative backlash. Self-serving Gulf diplomats stoke these fears. Apologists for Prince Muhammad justify his crackdowns by invoking the spectre of religious conservatism.


We get the job done

International migrants, 2020

Source: United Nations

Such concerns are probably overblown. A younger generation of *khaleejis* is more open-minded than their parents. Once an organised force, Islamists wield less power in today's Gulf. To see what they actually worry about, look to fast food.

Last year Subway posted an advert for sandwich-makers. It promised a five-day work week, comprehensive health insurance and opportunities for training and promotion. Anywhere else, the campaign would have been innocuous.

In the UAE, it caused an uproar. The advert was aimed at citizens: it featured photos of a young man and woman in traditional Emirati dress and framed the hiring push as “support [for] the state's efforts” to boost Emirati employment. Social-media users called it insulting. Subway retracted it. The attorney-general opened an investigation into the “contentious” campaign.

The UAE does not release reliable figures on unemployment. But unofficial estimates suggest that around 11% of young people are jobless. In Saudi Arabia, 17% of citizens aged 15 to 24 cannot find work. Bahrain's youth-unemployment rate has almost doubled over the past decade, reaching 10% in 2021. Some of the increase can be explained by the pandemic. But it also reflects a unique issue in the GCC: young people are stuck between a public sector that no longer wishes to hire them, and a private sector that is not ready to.

Ain't got no money

Like the other Gulf countries, the UAE is trying to strong-arm companies into hiring more citizens. Each firm is required to have Emiratis in 2% of its local positions (that figure will rise each year until it hits 10% at the end of 2026). As of January 1st those that fall short will be fined 6,000 dirhams a month for each Emirati they fail to hire. Hiring citizens to make sandwiches would have helped Subway meet its quota.

Emiratis do not all shun such work: Coop, a supermarket chain, has locals working the tills. But the Subway ad rankled. “It felt like, look, you guys are hungry, like a dog who is chasing the private sector,” says Dr Abdulla. “Is that what we deserve? In this land of plenty? That has 9m people from all over finding jobs?”

On social media Emiratis grumble about foreigners taking all the good jobs. Expats accuse locals of being spoiled and lazy. Such arguments would have been rare in decades past: the two groups had little reason to interact. Today they are being pushed into competition, and some locals are discovering they are unprepared.

In tests of science, maths and reading, 15-year-olds in the UAE score well below the average for the OECD, a club of mostly rich countries. In the latest exams run by the Programme for International Student Assessment, in 2018, the UAE ranked 47th out of 77 countries. Its neighbours are not doing any better. Qatar and Saudi Arabia ranked 59th and 70th, respectively.

The UAE would have ranked lower still without expat pupils, who outperformed their native-born peers. Boys do particularly badly: the 57-point gap in their reading scores, compared with girls, is the second-highest in the world. Researchers point to many problems with Gulf education. Teachers, often hired from abroad, are of mixed quality. Schools emphasise rote memorisation over critical thinking. Many children are raised by nannies who speak neither Arabic nor English fluently. And the promise of a public-sector job, regardless of ability, offered little motivation to work hard in school.

The UAE introduced mandatory military service for men in 2014. Conscripts with a secondary-school diploma serve for 11 months; those without spend three years in the army. In theory, the longer term of service for dropouts is meant to give them skills that prepare them for civilian jobs. But many who have left the army have found the job search difficult.

Compulsory service has another aim: it fosters a sense of nationalism. So does the war in Yemen, which since 2015 has seen a Saudi-led coalition battling the Houthis, a Shia rebel group. Emiratis have done the toughest fighting. In 2016 the UAE unveiled Wahat al-Karama ("Oasis of Dignity"), a monument to the country's war dead. "There is this implicit kind of message that says, you know, be prepared to make these sacrifices yourself," says one Emirati.

Similar changes are taking place across the Gulf. For decades, Saudi identity was rooted in its religious role: the birthplace of Islam and the home of its holiest sites. Prince Muhammad wants to change that. The kingdom's national day, in September, is now a time for patriotic celebrations.

His government is investing billions to develop Al-Ula, an oasis that boasts spectacular Nabataean ruins. Conservative clerics hated it: it was a monument to *jahiliyya* ("ignorance"), a term for the pre-Islamic era on the Arabian peninsula. Now the Saudi state is building hotels, organising festivals and urging both locals and foreigners to visit the site. Pagan history is suddenly to be celebrated, not shunned.

Nationalism bolsters support for rulers at a time of rapid change. But it can also have a dark side. Citizens report one another for critical comments on social media. Accusations of treason are common. Even government officials are nervous.

This kind of hyper-nationalism is not good for governance. It could also, paradoxically, weaken the state: the more citizens talk about political issues, the more they might want to be involved in politics.

A different concern looms in the UAE, where just 1m of its 10m people are citizens. One young man, musing about his army service, wonders how long 10% of a population can be asked to protect the other 90%. Another points out, more in disbelief than anger, that some of the government's recent reforms benefit only foreigners. Civil marriage is only open to expats. Newly minted citizens can keep a second passport, while the native-born cannot. It is not yet clear whether naturalised citizens will be required to perform army service or learn Arabic.

He's feelin' good

Emirati officials have long wondered how to reduce the demographic imbalance while sustaining a $500bn economy which relies on foreign labour. The government set up committees to answer the conundrum. "You know what our conclusion was? We can't do it," says a participant.

Again, official data is unreliable, but the fertility rate for citizens is probably around 3.5. That is high for a rich country and signals a growing population. But it will not grow fast enough to keep pace with the country's plans. In January Dubai said that it hopes to double the size of its economy over the next decade. Even if newborns could be put to work, there would not be enough Emiratis to achieve that.

A new life for them

Unlike in the UAE, Saudi nationals have piled into the service sector over the past seven years: more are working as baristas, sales clerks and hotel receptionists. That is partly because public-sector hiring has slowed. But a stint working in a hotel or mall is also a good way to meet people at a time when public life is expanding.

For many, though, a stint is all it should be, partly because these jobs do not pay well. The kingdom has no minimum wage, but it requires private firms to pay citizens at least 4,000 rials ($1,066) a month in order to count them toward their Saudisation quota. Higher fees for work permits are narrowing the pay gap, but migrants are still cheaper (over 80% earn less than 4,000 rials). And the government cannot increase quotas for—or the salaries of—Saudis without crushing the private sector.

Two hours north of Riyadh, however, there is little sign of Prince Muhammad's reforms. Thousands of Saudis converge each year on an expanse of barren high desert for the kingdom's annual camel festival. Visitors can buy everything from bridles and saddles to honey and dates. Bankers and lawyers ply their trade: even dromedary deals need loans and contracts. The centrepiece is an amphitheatre with a dirt track that hosts camel races and a camel beauty pageant. On a blustery December day, the crowd was all young Saudi men. There were neither tourists nor women (the lack of a women's bathroom suggested none was expected). Tickets were free.

Mahmoud, a jobless 20-something, tossed his headdress in the air and screamed for joy when the hometown favourite won the afternoon's beauty pageant. Then he headed for the exit. He had little else to do. His father worked for the agriculture ministry, but those kinds of civil-service jobs are harder to come by these days, and there are not many other options for secondary-school dropouts in rural areas. Asked about the cultural changes sweeping the kingdom, he offered a shrug: the concerts and amusement parks in Riyadh were too expensive to visit.

The stereotype, outside the GCC, is that its citizens are all *parvenus* who drive luxury cars and summer in Europe. In reality there are plenty of Mahmouds. Even if Gulf rulers get their ambitious plans right, and a rising tide lifts all boats, the coming years will be nerve-racking for many *khaleejis*. ■

America and Africa

Trade mission

NAIROBI

Duty-free access to American markets has created jobs in Africa, but not transformed trade

PANKAJ BEDI strides through his factory on the edge of Nairobi, past clattering sewing machines, bustling workers and boxes of jeans. None of this would be here, he says, were it not for the African Growth and Opportunity Act (AGOA). The landmark trade policy was introduced by Bill Clinton in 2000, granting duty-free access for more than 6,000 products from sub-Saharan Africa. Two years later, Mr Bedi opened United Aryan, his clothing business in Kenya. He now employs 14,000 people.

Lately Mr Bedi's financiers have all been asking the same question: what will happen in 2025, when AGOA is set to expire? It will be extended, he assures them, as it has been before. The trouble is that Congress has a habit of waiting until the last minute. Already, he has put on hold plans to grow cotton and make his own fabric. If an extension is not enacted this year, then orders from American buyers could start to dip, at the cost of African jobs.

Headwinds to trade

Further dawdling would reinforce a sense of drift, even as the Biden administration is trying to deepen economic ties in Africa to counter the influence of China and Russia. America's imports from sub-Saharan Africa have fallen since 2008, mainly because it has bought less African oil. Non-fuel imports including garments, nuts and South African cars rose rapidly in the early years of AGOA, but have grown only modestly since. The 35 AGOA beneficiaries collectively account for about 1% of American imports, less than they did before the act was passed. As a trade partner for Africa, America has been overtaken by China.

The reasons lie mostly outside AGOA itself. It is just one of several schemes whereby rich countries grant trade preferences to poorer ones to give them a leg-up on the development ladder. But in a world where most tariffs have fallen, preferences matter less. Of America's top 30 imports from AGOA-eligible countries, 20 would enter tariff-free anyway, according to the UN. Those include precious metals, diamonds, cocoa, vanilla and coffee.

The important exception is clothing, which ordinarily attracts tariffs as high as 32%. Here AGOA gives African exporters an edge. Manufacturers in the poorest African countries are exempt from tariffs even if they use fabric made elsewhere. In Lesotho, Madagascar, Kenya and Ethiopia, hundreds of thousands of workers stitch materials shipped from Asia into clothes for American consumers.

Optimists hope that making clothes could kick-start an industrial revolution in Africa, as it has in Asia and elsewhere. But in most African countries the cost of machines, power and labour is still too high to compete on an even footing with the likes of Bangladesh, which benefits from economies of scale and has huge clusters of clothing and textile firms swapping knowledge and skilled workers. "We are able to survive only because of AGOA," says the boss of one Kenyan manufacturer.

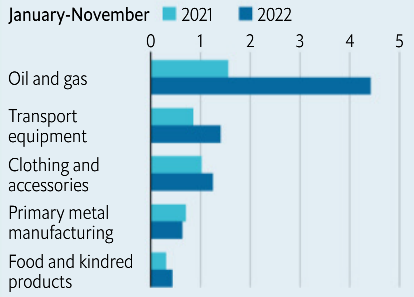
Uncertainty does not help. Trade preferences are not typically set down in a treaty. This means they can be withdrawn at short notice, as happened to Rwanda in 2018 after it irked American businesses by banning imports of second-hand clothes. And last year America kicked Ethiopia out of AGOA because of its human-rights abuses. A factory manager at an industrial park in the Ethiopian town of Hawassa says that business there is "totally dry", with firms leaving and workers idle.

Then there is the uncertainty over AGOA's renewal. In 2015 it was extended for 10 years to provide a bit more comfort. But investment will slow well before it is due to expire. Jean-Claude Mazingue, the chief operations officer at SOCOTA, which makes clothes and textiles in Madagascar, says investors in the country have the funds and knowledge to build a spinning mill to make yarn. "Why do we procrastinate a bit?" he asks. "It's because we don't know what's going to happen with AGOA."

That message is slowly seeping through to Washington, where AGOA enjoys bipartisan backing and the support of the executive branch. Katherine Tai, the US Trade Representative, has spoken of the need to "build on the accomplishments of AGOA". The US International Trade Commission, a federal agency, has been conducting hearings on the programme and will submit its findings next month. Still, a swift extension is not guaranteed. Adrian Smith, the Republican chair of the trade subcommittee in the House of Representatives, says he is "concerned" that without greater urgency AGOA could go the way of other trade preference schemes that have lapsed.

Light on manufacturing

Sub-Saharan Africa, exports to the United States under AGOA*, $bn



Source: AGOA.info *African Growth and Opportunity Act

New deals

There is also talk about how to deepen the trading relationship by signing two-way agreements. "Preferences by themselves aren't really what drives investment on the continent," says Constance Hamilton, the assistant trade representative for Africa. America is in talks with Kenya about a trade and investment partnership that would cover issues such as standards, regulations and workers' rights, though not tariffs, for now. Eventually, says Ms Hamilton, the kind of deal being discussed with Kenya could provide the "off-ramp" for other countries that want to move beyond preferences to a wider partnership.

Many in Africa dream of the continent negotiating as a single bloc. Some 44 countries have ratified a plan to create a continental free-trade area. But implementation is behind schedule and it will be a long time before they are ready to speak as one in trade negotiations, says Eckart Naumann of the Trade Law Centre, a South African think-tank.

Whatever comes next, the lesson of AGOA is that market access alone is not enough. "The pattern is clear: where there has been investment, you have seen exports," says David Luke of the London School of Economics. Only half of AGOA beneficiaries have strategies to take advantage of it. America could help through initiatives such as Prosper Africa, set up by the Trump administration to promote trade and investment. Florie Liser of the Corporate Council on Africa, an American business association, suggests the government should give tax breaks to firms that invest in manufacturing in Africa.

In December President Joe Biden welcomed leaders to Washington for the first US-Africa summit in eight years, in a sign that America is trying to reinvigorate its relationship with the continent. Twelve thousand kilometres away, at his factory in Nairobi, Mr Bedi thinks it is also high time that African governments and businesses seized the moment. His own success shows AGOA's potential benefits. But for Africa as a whole, "it has been the biggest missed opportunity," he sighs. ■

Earthquakes in Turkey and Syria

A crushing blow

ADANA AND ANTAKYA

Disaster strikes tens of thousands of lives and shakes two countries

THE SILENCE was the most unbearable part. Every quarter of an hour the bulldozers and cranes digging through the debris stopped working so that rescuers could hear the screams of people trapped underneath. There were none—only the sobs and prayers of onlooking relatives and friends. The rubble was all that remained of a 14-storey building in Adana, a city of 1.8m people in southern Turkey. A few hundred metres away the scene repeated itself. Another crowd, another apartment block reduced to a mound of concrete pancakes.

The full scale of the devastation caused by the twin 7.8 and 7.5 magnitude earthquakes that struck southern Turkey and northern Syria on February 6th remains unknown. As of early February 9th, the death toll had already reached 13,000 in Turkey alone. In Syria it had passed 3,000. Those numbers were bound to rise far higher. Across the disaster zone, hundreds of bodies were being pulled from the rubble every hour, with only a few survivors being found. Rescue teams had excavated only a fraction of the 6,000 buildings in Turkey that had collapsed.

In Iskenderun, a city on the Mediterranean, a fire consumed the port, swallowing one shipping container after another. White tents housing those displaced by the quake sprouted across the outskirts of towns. Further south, Antakya, a city of 400,000 people that is the successor to ancient Antioch, looked as if it had been carpet-bombed. In the city centre, practically every other building was destroyed. Corpses pulled from the rubble, wrapped in carpets, lined the main thoroughfare alongside the wounded. Volunteers and municipal workers distributed meals. A badly injured man stretched out on the pavement struggled to remain conscious. “Stay with me,” yelled his brother. “We still have so much to do together.”

Rescue teams were overwhelmed. Outside a collapsed house, an elderly woman begged soldiers to use a bulldozer to find her son, trapped inside. The troops used their hands, explaining that their heavy equipment was being used to look for survivors. “Auntie, we have to make some hard choices,” said one. “Your son is probably dead.” Elsewhere a man fed his elderly parents, trapped inside their home, through a hole in the rubble.

The government says it has deployed 60,000 officials, including 18,000 gendarmes and 10,000 police. Thousands more have arrived from abroad. In Iskenderun a rescue worker from Greece, one of Turkey’s historical enemies, burst into tears after saving a girl from a collapsed building. Soldiers have been redeployed from Turkish-occupied areas of Syria. Turkey’s president, Recep Tayyip Erdogan, declared a state of emergency in ten provinces, home to 13m people.

The government says that rescue teams have reached all of the affected areas. Locals disagree. In Antakya the help has come much too late. Frustration is mounting. “We have more than 2,000 destroyed buildings, and we’ve only reached 2-3% of them,” Lutfu Savas, the city’s mayor, said on February 8th. Many wounded died before ambulances could reach them. “They don’t have enough equipment,” said a man ▶▶

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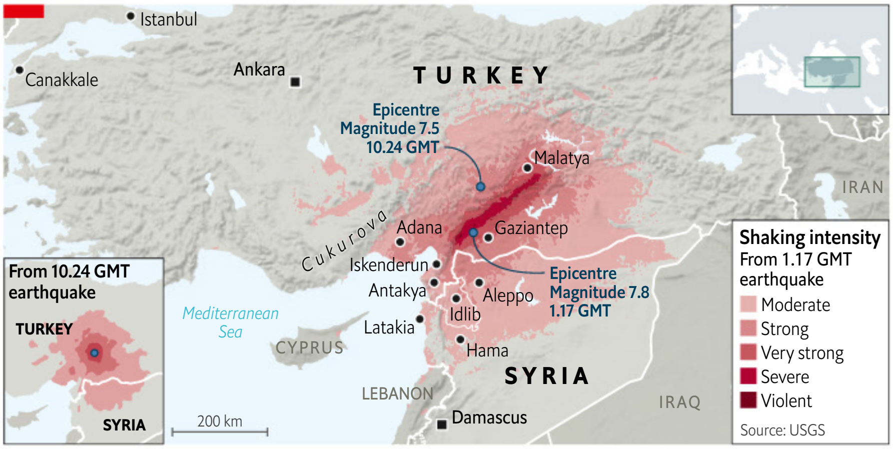


Source: USGS

sitting outside the rubble of his mother's house. He had given up hope that she was alive. In parts of town, government rescue workers were nowhere to be seen.

In Syria the earthquake hit a region already devastated by more than a decade of civil war. Deaths are roughly split between Idlib, a rebel-held province in the northwest, and areas controlled by Bashar al-Assad's regime. Most people in Idlib are displaced from other areas in Syria, and live in tents or makeshift homes. The White Helmets, a civil-defence group in the province, were sadly well-prepared: they have spent years digging people out after Syrian and Russian air strikes. But they have perhaps 3,000 volunteers in a region of more than 4m people. A spokesman for the group says they struggle to provide treatment. Russia and Syria have made a practice of bombing hospitals, leaving the province with little medical infrastructure.

The Turkish army, which has small bases across Idlib, has sent rescue teams. Turkey is Idlib's lifeline: some 2.7m people rely on international aid trucked across the border without the consent of the Assad regime, under a UN Security Council resolution that restricts activity to one border crossing. The earthquake has rendered it unusable. The closest airport, near Antakya, is shut because of runway damage. Roads to the border are impassable. On February 7th the UN announced that cross-border aid had been halted, though officials hope it will resume within days.

The situation is no better in regime-held territory. The toll seems worst in Aleppo, Syria's second city, but there is widespread damage in Hama to the south and Latakia on the coast. The regime has not done well with previous crises: it struggled to handle wildfires in western Syria in 2020, and could barely cope with the pandemic. It will have trouble moving supplies, as fuel is scarce owing to a shortage of hard currency.

Mr Assad has few friends. His regime has urged the West to lift sanctions imposed during the civil war, which have exemptions for humanitarian aid but in practice could still delay relief. The bigger obstacle, though, is the regime's habit of spurning offers of help or stealing foreign aid. A few countries have offered support. Russia, which has a military presence in Syria, said its soldiers would help clear rubble. The United Arab Emirates sent humanitarian aid via cargo plane. Algeria, Egypt and Iran have also promised to help. But few of these countries are willing and able to send substantial amounts.

Pulled from the wreckage

For Turkey, the destruction revives memories of 1999, when a massive quake in the outskirts of Istanbul killed some 18,000 people. That disaster revealed a deeply flawed urban development model, corrupt building practices and a lack of preparedness. Botched search-and-rescue operations exposed the myth of an omnipotent Turkish state, which Turks had been taught to believe in for generations.

Under Mr Erdogan and his Justice and Development Party, in power since 2002, things have improved somewhat. A government scheme has strengthened more than 3m housing units. Disaster response has been faster. Yet apartment blocks built in defiance of regulations still crowd cities, notably in Istanbul, which sits atop one of the world's most active earthquake zones. An amnesty on unregistered construction work, passed by Mr Erdogan's government in 2018 to win over voters ahead of general elections, made things worse.

Falling down on the job

Most of the buildings destroyed seem to predate the 2000s, but many are newer. In Antakya an apartment complex from 2010 keeled over with as many as 800 people inside. A tower block that collapsed in Malatya, a city near the second quake's epicentre, had just been completed last year. Had building codes been respected, says Mustafa Erdik, a professor at Bogazici University in Istanbul, "you would have had damage, but not such pancake collapses."

If the state is falling short, civil society is not. Volunteers and donations are pouring in from every corner of Turkey. Gold miners from Canakkale, firefighters from Istanbul and farmers from Cukurova are clearing rubble. Shop and restaurant owners are handing out food. Scores of hotels are opening their doors to the homeless.

His government's spotty emergency response and cosy relationship with construction tycoons may come to haunt Mr Erdogan. He faces elections expected on May 14th. The disaster will compound Turkey's economic woes: the country is already coping with slowing growth and 58% inflation. The regions struck by the earthquake account for nearly 10% of GDP. Selva Demiralp, an economist at Koc University, says Turkey could lose two percentage points of GDP in tourism revenue alone. Turkey's main stock index fell 15% in the three days after the quake. Some stocks surged, however. They were those of cement companies. ■

Russia

Ploughshares into swords

MOSCOW

The technocrats keep funds flowing for Vladimir Putin's war, as the economy is slowly repurposed

VADIM, A CAR-PARTS dealer from a provincial Russian town, never supported the war. Indeed, he broadly backed the West's sanctions on Russia: how else could you stop the "monsters" intent on destroying his country, as well as Ukraine, if not by hitting their pockets? But when the West's measures hit the supply of parts he needed from his distributors, he followed business logic and sourced them from wherever he could. The search took him to Turkey. A web of intermediaries offered various schemes to deliver his goods for a handling cost of between $2 and $4 per kilogram. Today, they arrive, often in bags labelled "personal effects", three to four weeks after ordering. Vadim asks no questions, provided the price is right. He understands that the same applies to customs officials.

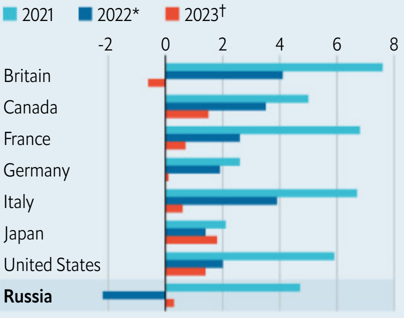
Vadim's workaround reflects a larger story, as Russia reverts to primitive means to muddle through. Tough European and American sanctions, introduced in the wake of the invasion of Ukraine last February, were supposed to isolate the Russian economy. But with only half the world observing the measures, reality was always going to be more complicated. Traders in friendly countries like Turkey, Kazakhstan, India and China now facilitate the import of the restricted goods Russia needs, for a price. By September 2022 Russian imports in dollar terms exceeded their average monthly value for 2019. And these countries also take a large share of the raw-material exports Russia once sent to Europe—at a steep discount.

This has allowed the Kremlin to avoid economic catastrophe. Gross domestic product (GDP) contracted by just 2.2% last year, smashing many economists' expectations, made in the spring, of a decline of 10% or more; nowhere near enough to cripple Vladimir Putin's war effort. Unemployment remains low. House prices have stopped rising, but there is no sign of a crash. Consumer spending is dragging on the economy, but not by much. In 2023 the IMF even expects Russia to grow by 0.3%—more than Britain and Germany.

Russia's isolation also offers the most ruthless a once-in-a-generation opportunity to get rich quick. Before the war European and American firms held direct investments in Russia worth about $350bn. A decree issued in the wake of the invasion obliges Western companies closing down in Russia to first obtain a permit; they can then sell their assets only at government-determined prices, set at a discount of 50% or more to their market value. A corrupt system has therefore emerged. One Western industrialist who is helping several European companies quit Russia says that opportunistic Russians and even Westerners are working their government connections to snap up bargains. "We've returned to the 1990s," he says, a wild time of gangster capitalism. "You can safely assume the new owners will ignore niceties like sanctions once they take over."

About turn

GDP, % change on a year earlier



Source: IMF

*Estimate †Forecast

The restrictions were part of a package of extreme measures introduced by Russia's technocrats to stabilise the economy in the months following the invasion. They have succeeded far better than their authors might have hoped. Before the invasion, many of them were clearly unhappy with the idea of an unprovoked war that risked wrecking the modernising economy they had spent their careers creating. Several—including Elvira Nabiullina, the head of Russia's central bank; German Gref, the boss of Sberbank, Russia's biggest; and Alexei Kudrin, a reformist former finance minister—are believed to have made representations to Mr Putin when they saw that an invasion was on the cards.

But they quickly stepped into line once the war was under way, stopping a bank run from turning into a full-blown financial crisis and getting inflation under control. Only a handful of lower-level bureaucrats resigned from the central bank and the finance ministry. One former central-bank official says he was both impressed and appalled by his colleagues' efforts to keep the war machine afloat. "They understood what they were doing, even while they comforted themselves by pretending the people who would replace them would be worse." One high-level source close to the Kremlin says, "The elite are prisoners. They are clinging on. When you are there for that long, the seat is all you have."

Emboldened hardliners are agitating for more radical change. Some dream about removing important figures that they perceive to be pro-Western. But as long as those people keep his war effort funded, Mr Putin is unlikely to oblige. It is difficult to know how well they are doing, as many key statistics are now secret. But back-of-the-envelope calculations are possible. Russia's 2022 budget was planned at 23.7trn roubles ($335bn). Government figures indicate that actual spending in 2022 reached at least 31trn roubles.

According to Natalia Zubarevich, an economist at Moscow State University, only about 2.5trn roubles of the extra spend are accounted for by benefits and ▸▸

other transfers: pensions, cheap loans, additional child allowances. That leaves roughly 5trn roubles unaccounted for; much of it, presumably, going on armaments. There are obvious signs of the economy being mobilised for war. Defence firms are working 24 hours a day, in three shifts. Uralvagonzavod, Russia's main tank manufacturer, has enlisted at least 300 prisoners to fulfil its new orders. And steel production fell by just 7% in 2022, far less than the 15% some expected given the decimation of the car industry, heavily affected by sanctions that have interrupted the supply of semiconductors.

The Kremlin would clearly like to militarise the economy further. In October the government established a new council designed to co-ordinate government and industry. But finding fresh sources of cash is about to become much trickier. Mr Putin's invasion coincided with high prices for hydrocarbons. In the first five months of 2022, such revenues were two-and-a-half times higher than in the year before. But lower global oil prices, as well as the halting of gas exports to the West and an oil-price cap, have hit that income stream, if less dramatically than the West had hoped.

The European turn away from Russian hydrocarbons has left a gap that the Kremlin is trying to offset through discounted sales to other markets, like Turkey, India and China (though there is evidence that the actual discounts are smaller than officially reported). A further price cap, on petroleum products, which came into force on February 5th, will be harder to fix, since those big markets already have their own established refineries. Russia will hope to sell more crude to compensate, and the impact will become clear only in time. At any rate, Russian hopes that it may still be able to get $70 per barrel of its oil, the price the government needs to balance the budget, may prove optimistic.

However much the economy is cannibalised into a more primitive wartime outfit, its governing class understands there is no turning back, at least while Mr Putin is around. It heard the president declare in December that there would be "no limits" to the resources available for the armed forces. That means cuts elsewhere. Health and education spending will be reduced, suggests Ms Zubarevich. "The worse things get, the more necessary war will become," says a former mandarin.

The message that Russia is fighting for its survival against an encroaching West has become a powerful tool for repression. But it will mean ever-growing demands by the Kremlin on Russia's long-suffering people. "They are already militarising people's consciousness, but it's a long-term process," says the former civil servant. "Hitler took five years. They are only just getting started." ■

Ukraine

The enemy within

KHARKIV PROVINCE

Treating PTSD in Ukraine's soldiers is a huge task

IN THE GLOOM of a grey and freezing late-January morning it is a forbidding place. Its location is also secret, beyond the fact that it is somewhere in Kharkiv province in Ukraine's north-east. Soldiers arriving or departing from what is the country's only military rehabilitation centre dedicated to post-traumatic stress disorder (PTSD) do so in civvies, so as not to draw attention. Every week around 100 soldiers arrive for treatment, suffering the gamut of battlefield trauma symptoms: from sleeplessness and nightmares to flashbacks and crushing feelings of guilt at having survived when so many of their comrades fell.

Sergeii Batowslay, a soldier since 2015, says that half of his unit, more than a hundred men, have been killed since the Russian invasion began almost a year ago. On the front you are constantly pumped up and full of aggression, he says, and that takes not just a mental toll but a physical one too, leaving you run down and exhausted. He has suffered from panic attacks, and in civilian life small irritations can trigger surging aggression. In general, he says, "guys keep their problems to themselves," but here, being able to talk, one-to-one with a psychologist or in a group with other soldiers who have experienced similar symptoms, has been a breath of fresh air.

Typically, says Colonel Oleksandr Vasylkivskiy, the director of the centre, PTSD is brought on by explosions, triggering panic or withdrawal. Men report being haunted by the cries of their wounded and dying comrades. Officers and psychologists attached to units try to spot the symptoms of PTSD in their soldiers early, in order to send them for treatment before the problem escalates and they become aggressive or violent in civilian life. Families can join therapy sessions at the centre to learn what their husbands or fathers have been through, and how to help.

The wages of war

The centre opened its doors in July and so far some 2,000 soldiers have passed through it. All this is new for Ukraine. Before the first phase of the war in 2014-15, when Russia seized Crimea and supported separatists in Donbas, few who needed to see a psychologist wanted to, says Colonel Vasylkivskiy, because it was akin to admitting to "being crazy". Until then, psychologists were also, in Ukraine's inherited Soviet military tradition, part of its political section. Their job was not to treat soldiers with problems but rather, says Major Maksym Baida, to punish them for not being up to their job. Now the job of military psychologists like him is help soldiers and persuade them that they are not to blame.

Much has changed since 2014-15. Some soldiers returning from the front with psychological problems, exactly like Western soldiers coming home from Iraq or Afghanistan, have turned to drink and drugs and can become aggressive and violent. As a result, says Colonel Vasylkivskiy, the number of psychologists in the army has been increased by about 40%, and soldiers in training are told not to be shy about turning to them.

Treatment is not expensive. It costs €140 ($150) a week to care for a soldier. But under Ukraine's current rules, though the military budget covers rehabilitation for physical injuries, it does not pay for treatment for PTSD. So the costs for the centre are being borne by volunteer organisations. The therapy seems to work; Colonel Vasylkivskiy says that after a week in his centre almost everyone he has treated has been ready to return to the front.

With a million men under arms, for months at a time and enduring gruelling conditions, the colonel says that his one centre is not nearly enough. "We need a hundred," he says, but adds that they need to be made available for civilians too. That, though, is a whole different, and surely even bigger, problem. ■

NE PAS BATTRE EN RETRAITE POUR SAUVER NOS RETRAITES
NON 64 ANS

France

Arguing about laziness

PARIS

Emmanuel Macron's pension reform is about much more than pensions

“MACRON, TAKE your retirement, not ours!” read one placard at a recent protest march. “Metro, work, grave”, read another, on a more existential note. On February 7th yet more demonstrators took to the streets to protest against President Emmanuel Macron's plan to raise the minimum pension age from 62 years to 64. The turnout was not as high as at two previous strike days in January. But all trade unions back further strikes. Most opposition parties, and a majority of the French, are also resolutely against the pension reform.

The legislation, which went to parliament on February 6th, has not only divided the country but prompted a dialogue of the deaf. The government says the reform is “indispensable” if the pension regime is to balance its books, and France is to preserve its generous pensions, at a time when people are living nearly a decade longer than they did in 1980. Opponents accuse the government of brutally dismantling the hard-won rights of a modern welfare state.

So far Mr Macron's centrist government has failed to convince the French that raising the retirement age is either a necessary or a fair way to plug an annual pension deficit that will reach €14bn ($15bn) by 2030. Critics from the opposition left-wing alliance, NUPES, say that it would be fairer to tax “super-profits”, or the rich. A 2% tax on the assets of French billionaires, suggested a report from Oxfam France, would wipe out the pension deficit overnight. The right-of-centre Republicans, who in a previous life increased the pension age from 60 to its present 62, now have the nerve to insist that Mr Macron's version is unjust.

By focusing narrowly on the retirement age, though, the government is also failing to explain that this is not just an accounting matter. It fits into a broader attempt by Mr Macron to put work at the heart of his second-term project. “Pension reform”, says Marc Ferracci, a labour economist and a member of parliament for Mr Macron's centrist party, “is central to the campaign objective of bringing about full employment, and raising the employment rate of older workers.” Full employment would mean curbing joblessness from 7% today to around 5%, a level not seen since 1979. At 56%, the share of 55- to 64-year-olds in work in France has increased by five points on Mr Macron's watch, but remains well below that of 72% in Germany.

Saving the silver

To this end, the government wants to introduce a “senior index”, to monitor the share of older workers on the payroll, and discourage firms from easing out the grey-haired, which they often do. For the young, it is expanding the number of apprenticeships, which reached 980,000 in 2022, the highest level ever recorded. In parallel, the government has tightened the rules on unemployment benefits that apply during periods of economic growth and labour shortages. Many firms in France currently report having trouble filling vacancies.

Such a project makes sense for France. Yet, since the pandemic, many countries have been rethinking the nature of employment. And, in the French mind, progress towards a better society is measured by the easing of the burden of work. In 1880 Paul Lafargue, a socialist thinker, published “Le Droit à la Paresse” (“The Right to be Lazy”), arguing for a three-hour working day and denouncing the “madness of the love of work”. Two decades ago “Bonjour Paresse” (“Hello Laziness”), a guide to doing nothing at work, became a bestseller.

The rolling back of working time, originally designed to protect workers from abuse, has become part of the country's post-war story. In 1982 François Mitterrand cut the retirement age from 65 years to 60. Two decades later France introduced the 35-hour working week. The share of the French who consider work “very important” dropped from 60% in 1990 to just 24% in 2021. The pandemic has accelerated this shift, says Romain Bendavid, in a paper for the Fondation Jean-Jaurès, a think-tank. By 2022 only 40% of the French said they would prefer to earn more and have less free time, down from 63% in 2008.

Insofar as French politicians are talking about all this, it is largely to trade insults and slogans. Sandrine Rousseau, a Green leader from the NUPES coalition, argues bluntly for the “right to laziness”, and wants to bring in a 32-hour working week. Gérald Darmanin, Mr Macron's interior minister, dismisses NUPES as a group of “people who don't like work” and think they can live in a “society without effort”.

Not so lazy

In reality, French society is more complex than this war of words suggests. Thanks to looser rules, French workers actually on average these days put in a longer week (37 hours) than Germans (35 hours), and are nearly as productive per hour worked. Even within NUPES, some politicians, including Fabien Roussel, the leader of the Communist Party, embrace the value of work. The French may say that work is no longer central to their lives; but a new study by the Institut Montaigne, a think-tank, shows that three-quarters also say they are broadly happy at work, a figure that has been stable for several years.

France is not having that debate, however, and 64% are still against the pension reform. Mr Macron, says a source close to him, is determined to hold firm. If he can't find the votes in parliament, where he no longer commands a majority, the reform could be pushed through using a special constitutional provision, though at the risk of provoking fresh legislative elections. Either way, unless Mr Macron can persuade the French of its merits, he could end up with a successful reform to his name, but a bitterly resentful country. ■

Charlemagne | The copycat trap

Europe should not respond to America's subsidies binge with its own economic blunders

USA
GO GREEN

AMERICAN SUCCESS HAS a way of flustering Europe into bad policies. Search engines are one dispiriting example. As Google and Yahoo dominated the internet in the early 2000s, Jacques Chirac, then president of France, beseeched Europe to "go on the offensive" so that America would not dominate "the power of tomorrow". With the EU's assent, France poured around €100m (roughly $147m back then) into Quaero, a would-be rival to America's giants. Predictably the venture was dubbed "Eurogoogle". Equally predictably, the big firms and public outfits that pocketed the money frittered it all away. Whoever Google's rivals are today (see Business section), they are not from Europe. Those curious to find out what happened to Quaero can ask Google, or a chatbot.

These days it is green technology that is "the power of tomorrow", and Europe once again fears America is leaving it in the dust. The Biden administration's Inflation Reduction Act (IRA), passed in August, offers at least $400bn of public money over ten years to accelerate the roll-out of renewable energy and electric vehicles. America's carbon-cutting ambitions were at first lauded by the EU. But the penny swiftly dropped. The new subsidies come with a protectionist tinge; they are targeted at stuff that is mostly made in America, in a bid to shift supply chains there. Robert Habeck, Germany's economy minister, fretted that valuable green investment will be "sucked away" from Europe across the Atlantic.

Quaero ended up merely incinerating a pile of public cash. A botched response this time around could be far costlier. Wasteful EU copycat subsidies are on the cards. Worse, a plethora of tried-and-known-to-fail economic policies have been dusted off to counter the manageable threat posed by the IRA. These would steer Europe away from the free-trading open economic approach favoured by northern Europeans—including Britain, when it played a key role in steering the EU—and which currently prevails. The new path would have a distinctively French feel. At its core is a *dirigiste* industrial policy, where ministers dole out subsidies to favoured "national champions" protected from pesky imports.

For decades this misguided approach has been banned by the EU, which feared beggar-thy-neighbour subsidy races within the union. The "state aid" rules that underpin the single market are designed to ensure that businesses in any of the union's 27 countries compete on a level playing field. Consumers have benefited massively from what is among the EU's best policies. But the supposed need to respond to the IRA in kind has given an opening to those who prefer less market and more political meddling. This is all the more worrisome as anti-subsidy rules were softened in 2020 to help navigate the response to covid-19, and then again last year to deal with the energy crisis.

The alliance in favour of driving a horse and carriage through the state-aid rules includes Germany and France—a duo that often gets its way in EU matters. They want Europe to counter American subsidies with its own. But because the bloc itself lacks the resources to fund such industrial largesse centrally (without an increase in its budget, which is not on the cards), it will come down to national governments to splurge on corporate bungs. State-aid rules would thus have to go. This line of thinking has alarmed many in the rest of the EU, as will be evident at a summit of national leaders in Brussels on February 9th. Small countries worry they will be unable to match the largesse of Paris or Berlin, and so will see their companies fall behind. Italy, a big industrial country with bad public finances, is among those that know they will also be unable to keep up. They make for sizeable opposition to French and German plans, which might not carry the day as a result.

Yet there is no need for Europe to scrap the policy that has underpinned its economic success. The Biden administration's me-first approach is no friendly act to Europe. But the supposed threats posed by the IRA are overstated. A dollar spent in developing a battery plant in Kentucky does not preclude a euro being invested in Austria, no matter what European chief executives goading politicians into fattening their bottom lines might claim. Technology pioneered in America at great expense will also be available in Europe—just as Google is, for example. The need for green industrial products is so great that factories will have to be built on both sides of the Atlantic. Mr Biden is willing to pay dearly to juice America's industrial base as much for geopolitical reasons as economic ones: he wants to "decouple" certain supply chains from China so as not to depend on it for future goods. Europe has little need to duplicate that effort so long as it has alternative suppliers to China available—something the IRA, by subsidising American production, makes more likely.

America is spending lavishly on cutting carbon in part because it lacks policies that allow it to cut emissions more cheaply. It is stuffing businesses and consumers with subsidies because they currently have no incentive to go green: try selling an electric vehicle to someone paying $4 per gallon of petrol. Europe has already nudged its economy onto a more ecological path—motorists there pay the equivalent of $7 per gallon, for one thing. Europe, unlike America, already often charges firms for the carbon they spew as part of their operations. The incentives for owners and managers to green their businesses already exist.

Relax, don't do it

EU policymakers should stick to their existing, unFrench approach. There is lots Europe could be doing to improve its economic prospects. The single market should be deepened—for example when it comes to capital markets—not hobbled. Productivity could be raised with better training and education. Anaemic spending on research & development should be boosted. That is less exciting than showering shiny new industries with public money. It has the distinctive advantage of being known to work. Try Quaeroing it. ■

Immigration policy

And still they come

The British government is planning yet another crackdown on asylum-seekers

Ali's first experience of Britain was of kindness. A few miles from Dover the fishing boat he had taken from Dunkirk sprang a leak; along with several dozen fellow migrants he was rescued by the coastguard. On the shore, people were waiting with blankets. Nine months on, things are now looking pretty bleak for the 21-year-old Iranian. Living in an overcrowded hotel in Carlisle, he is unable to work or continue his education (beyond a brief weekly English class). He has no idea how his asylum application—made on the grounds that as a Christian in Iran he was threatened with persecution—is progressing.

That is nothing compared with the anxiety he feels about his father, who arrived on another small boat two weeks later. Within days the Home Office had chosen him for the first plane of asylum-seekers bound for Rwanda, as part of a government plan not just to process claims in the African country but to keep successful applicants there. That flight was cancelled on June 14th after the European Court of Human Rights intervened; Ali's father has since been waiting in a hotel near Gatwick to learn his fate. Ali fears that, if asylum flights to Kigali ever go ahead, he will never see his father again.

The plan to fly people to Rwanda was cooked up last year in order to deter migrants taking small fishing vessels and flimsy inflatable boats across the English Channel. Tighter security on ferry and tunnel routes helps explain why such crossings have risen every year since 2018 (see chart on next page). In 2022 some 45,755 people came to Britain in this way. They made up the largest proportion of over 70,000 asylum claims—itself the highest number in 20 years.

That is still lower than the number of claims lodged in either France or Germany. It represents only a fraction of the overall number of immigrants that entered Britain in 2022. But small boats are a bigger problem than the numbers suggest. This is partly because of humanitarian concerns: in recent years dozens of migrants have died in the channel. But it is also because such a visible manifestation of the government's inability to control its borders has become a big political headache.

Nothing the government has so far tried has worked. In the past four years Britain has made four deals with France to beef up security in Calais, where migrants (and traffickers) congregate. The latest, struck in November, had the same limits as the others: it does not let British authorities patrol in France nor return those whose asylum claims fail.

Britain has also tried to make itself a less alluring destination. But there is no shortage of young migrants from poor countries who are willing to endure a frosty reception and long waits in overcrowded hotels for the prospect of a better life. That is why the solution promoted by many of

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the charities that work with asylum-seekers—providing temporary “safe passage” visas, which would allow migrants to travel by ferry and lodge claims on arrival—is no such thing. Britain would be overwhelmed by applicants, many of them entirely deserving of protection.

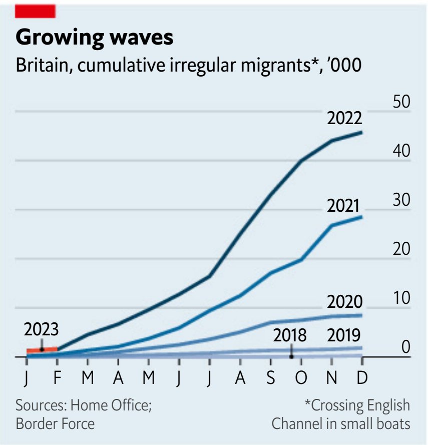
The government has promised a fresh push to solve the problem. Rishi Sunak has made “stopping the small boats” one of his five pledges for 2023. On February 2nd he said a “stop the boats bill” would be published “in the coming weeks”. He suggested it would consist of laws making it easier to detain and remove illegal migrants.

Being able to deport those whose claim is rejected is a crucial part of an asylum system. There is little point in assessing people’s claims for asylum and granting some, if those who are turned down are also allowed to stick around. Britain is thought to have at least 800,000 unauthorised immigrants. The fact that no one has to have an identity card makes it easier for those who have failed in their applications, or never made one, to melt into the crowd.

But Mr Sunak’s legislation is likely to end in disappointment. The new laws will probably be designed to make it easier to send asylum-seekers, perhaps before their claims have been processed, back to their home countries or to a third country like Rwanda. The first option would in many cases be illegal; a recent agreement with Albania to return migrants there could not be replicated with countries that are considered unsafe without breaching international law. (There is talk of taking Britain out of the European Convention of Human Rights if the courts did intervene.) As for the Rwanda policy, it may be impractical as well as morally dubious. The government in Kigali has suggested it only has capacity to accept a few hundred people. Attempts to find other third countries have failed.

Far better would be a more comprehensive deal with France. Setting up a processing centre for asylum claims in northern France would stop some people from making the crossing by boat. (Britain should also consider allowing asylum-seekers to apply from British consulates elsewhere.) This would lead to more claims and more approvals, but since they would be a lot less visible and chaotic than dinghies at sea, it might well be more popular.

A comprehensive returns agreement with France would also help. Post-Brexit Britain has no formal agreement allowing it to return asylum-seekers to any EU country. The European Stability Initiative, a think-tank, believes that if almost all irregular migrants were returned swiftly to France—which would be legal, because France is a safe country—boat crossings would quickly cease. Since France has repeatedly insisted that return agreements are a matter for the EU, this would need to be part of a wider deal with the bloc in which Britain would have to play its part, by itself accepting a given number of asylum-seekers from the EU (and beyond).


Growing waves

Britain, cumulative irregular migrants*, ’000

Sources: Home Office; Border Force

*Crossing English Channel in small boats

Such a deal, with either France or the EU, is hard to imagine right now. Improving the existing system for processing claims is a more feasible goal. By September 2022 68% of applicants had been waiting more than six months for a decision on their claim, compared with 49% in 2017. In that time the number of people waiting for a decision has increased threefold, to around 98,000. If migrants know there is likely to be a long wait in Britain before there is any prospect of being deported, they are more likely to try to get there.

The government’s previous crackdowns seem to have slowed things down even more. Since January 2021 it has issued “notices of intent” to some asylum-seekers while it decides whether their claim can be treated as inadmissible. These have made no appreciable difference to the way asylum claims are processed, says Colin Yeo, an immigration barrister, except to add a further six-month delay to proceedings.

This backlog imposes heavy costs. The government spends £7m ($8.4m) a day to feed and house asylum-seekers. They are not allowed to work until they have waited at least 12 months, at which point they can apply for jobs on the shortage occupation list; they should be able to do so earlier. Claire Moseley, the founder of Care for Calais, which works with asylum-seekers on both sides of the channel, says the long wait is especially damaging for those who have experienced trauma and ill health.

Immigration lawyers say part of the problem appears to be a shortage of experienced Home Office staff able to make difficult decisions. Britain grants asylum at a much higher rate than France or Germany. That may be because a big proportion of those who travel to Britain by boat are from countries, like Syria, that genuinely command a high approval rate. Yet it may also be because of sloppy decision-making.

Ultimately, however, only a comprehensive arrangement with France and the EU offers the realistic prospect of quickly resolving the small-boats problem. Instead the government’s focus seems likely to be elsewhere—on draconian laws that risk performative rows, damage to Britain’s reputation and more uncertainty for Ali, his father and others like them. ■

Plane speaking

Volodymyr Zelensky, the Ukrainian president, pressed parliamentarians for “powerful English planes” on a visit to London on February 8th. In an address in Westminster Hall, the president gave the Speaker of the Commons a pilot’s helmet with the inscription: “We have freedom, give us the wings to protect it.” Of his meeting with King Charles, Mr Zelensky said: “In Britain the king is an air-force pilot. In Ukraine today every air-force pilot is a king.” Rishi Sunak, the prime minister, has offered training for Ukrainian pilots; the government said only that it would investigate giving planes, too.

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Bagehot | Bucket-list Tories

Alan Clark's final set of diaries provides a guide to the Conservatives' ailing state

Alan Clark knew he was dying. The Tory politician and diarist was "completely desexualated"—a disturbing condition for a philanderer—and whiled away the afternoons "listlessly plucking at *Hello* or an Audi catalogue". Eye-blurring headaches had bugged him for years, but he ignored the optician's injunction to have them checked out until a sudden hospitalisation in May 1999 uncovered a vast tumour lodged in the whirring brain of the MP for Kensington and Chelsea. Four months later, he would be dead.

Massaging his temples at the kitchen table, he could still see some things clearly. As the general election of May 1997 that would grant Tony Blair a landslide drew near, his colleagues predicted a hung parliament or a small Labour majority at worst. John Major, the prime minister, was on chipper form; the cabinet trundled along. "We will win, Alan. We-are-going-to-win!" bellowed Nicholas Soames, another MP, one evening in April 1997. Clark knew better. "The gap is intractable, widening indeed," he wrote. "Not so far distant T34s were again at the fortifications on the Oder."

Clark harboured darkness beneath the wit. He kept a signed portrait of Hitler, whom he called "Wolf", in his safe. The BBC called him "the UK's favourite cad"; modern accounts of his conduct would be much harsher. But he is worth reading still. The final volume of the diaries that he kept for nearly five decades holds a mirror up to the frailty of the current Conservative Party.

That is partly because of the parallels between the 1990s and now. Conservative MPs endlessly chew over those years. Optimists insist the next election can be a repeat of the result in 1992, in which an innately conservative electorate backed a diligent Tory leader over a semi-reformed Labour Party. But in their bones, they know a fate like 1997 is more likely. Psephologists, like doctors, are fallible, but the prognosis is in and it is not promising: polls indicate a consistent Labour lead of around 20 points. Rishi Sunak's personal ratings are weak and weakening. "The people think they no longer have the answer to their needs, and the general cry of the voter will be 'Kindly fuck off'," says an old friend of Clark's.

It is partly because sleaze is again crippling the party. Today's version is less salacious than that of the 1990s—Clark would be exposed by the *News of the World*, a newspaper, for having affairs with a judge's wife and also her two daughters. But it is just as damaging. On February 7th Mr Sunak reshuffled his cabinet to replace Nadhim Zahawi, the party chairman he had fired over his tax affairs. That same day MPs questioned Richard Sharp, the chairman of the BBC, over reports that he was involved in brokering an undisclosed loan for Boris Johnson, shortly before Mr Johnson recommended his appointment to run the broadcaster. (Mr Sharp has denied arranging any financing.)

But Clark is also an unmatched guide to the Tories today because the diarist and the party share so many morbid symptoms. A dying man wishes to put his affairs in order. Clark worried about clearing his debts. Mr Sunak's agenda for government—fixing the public finances, massaging down health-service backlogs—can sound like a tidying-up exercise after years of hard living. It is immoral to leave debts to the children, he often intones. Clark wanted to fix the plumbing at Saltwood, his castle in Kent, before he died. As part of his reshuffle Mr Sunak embarked on yet another rewiring of Whitehall by creating new departments for energy, science and business. It may prove successful, but Mr Sunak is unlikely to be around to enjoy the fruits of his labours.

What have I done with my life, the dying man asks? Clark raced to finish the "Big Book", his history of the Tories, and hoped to be remembered for the diaries. The same question dogs the Conservatives after 13 years in office and five prime ministers, each of whom has undone their predecessor's work. They can say they spared Britain from Jeremy Corbyn, Labour's far-left ex-leader, and got it through the pandemic. But in gloomier moments they see a country in which the tax burden has rarely been so high, the public services so creaky or the culture so unconservative. As for Brexit, the best its backers can claim is that it is a work in progress.

The twilight of a life is a time to fulfil long-held dreams. Clark himself pined mainly for Eriboll, his Scottish estate. For some Conservative backbenchers, there is a much longer list of ambitions: leaving the European Convention on Human Rights, say, or scrubbing the statute book of EU law. Individuals still dream of carrying a minister's red box while there is still time. The most generous interpretation of Mr Sunak's elevation of the boorish Lee Anderson to the deputy chairmanship of the Conservative Party is to indulge a bucket-list wish.

Westminster echoes with the chiselling of Tory epitaphs. Liz Truss hopes that history will eventually smile on the 49-day premiership that wrecked the party's reputation for economic management. In a rambling and conspiracy-theorising essay published in the *Sunday Telegraph* on February 5th, the former prime minister blamed shadowy forces for derailing her dash for growth. Mr Johnson wishes to be remembered for helping Ukraine. On February 3rd he granted a television interview to Nadine Dorries, the most adoring of his erstwhile cabinet ministers (imagine the Watergate burglars interrogating Richard Nixon). But history does not let you choose. Clark wanted his gravestone to read: "Happily married to Jane for 41 years." Jane left it blank.

The afterlife

Parties, unlike people, can be reborn. An electoral doomsday has certain attractions: the clear-out of the elders, a leadership election and a fresh debate about the future of conservatism. "What I hope quite firmly now," Clark wrote in 1995, "is that the Tory party is smashed to pieces and a huge number of people lose their seats. Then at last perhaps my particular brand of radicalism can grow." Clark was not keen on dying. But he could see the bright side in his colleagues' demise. ■

Techno-philanthropy

Giving 3.0

A new generation of tech philanthropists has deep pockets, grandiose ambitions and an impatience with bureaucracy

When Andrew White first sold a chunk of his business in 2021, he knew he wanted to give some of the proceeds away. Indeed, if all goes according to plan, he hopes eventually to give over $20m to charity. But Mr White was still busy running FundApps, a compliance-monitoring service for investors. That left little time to read up on development economics or scour charity rankings.

The model that big-name philanthropists have followed for generations—setting up a private foundation and hiring a team to run it—was out of the question. “Creating another organisation to manage your money is just wasting it,” says Mr White. After all, he says, “these people are very good at what they do, so why don’t you trust them to do it?” In the end, Mr White gave the money to Founders Pledge, a British charity with more than 1,700 members in 39 countries. He told Founders Pledge he would like the cash to go to education and poverty relief in poor countries, then left its researchers to sort out the details.

Mr White is part of a new class of philanthropists very different from those that went before. They are often young, impatient with process and detail, and keen to make a difference in a hurry. Most made their money in the software and computing industry that has, since the turn of the century, been the world’s great engine of wealth creation. Along with their money comes their industry’s worldview. “I was reading *Wired*, not the *Chronicle of Philanthropy*,” says Scott Harrison, the founder of charity: water, which aims to give clean water to everyone on the planet.

No one has more money to give away than the tech tycoons. *Forbes*, a magazine which tracks such things, reckons that 26 of the 100 richest people in the world in 2022 made their money leading technology firms of various sorts, including seven of the top ten. (The recent drop in tech valuations has dented the sector’s dominance, but not ended it.)

They are even more dominant when it comes to giving that money away. The *Chronicle of Philanthropy* (which Mr Harrison said he did not read) estimates that, of the $33.4bn given away by America’s 50 biggest donors in 2021, around three-quarters came from people who made their money in tech (see chart on next page). Bain & Company, a consultancy, reckons tech magnates hold about 8% of the total wealth of India’s super-rich, but account for about 35% of the charitable giving.

That tide of money carries with it the culture and worldview of the industry that created it. Tech has spent the past two decades disrupting everything from shopping to television. Charitable giving, it seems, is next.

To see just how different the newcomers are, compare them with their best-known forebears. The grandfathers of modern philanthropy are American industrialists like Andrew Carnegie, Henry Ford and John D. Rockefeller. Such men gave the bulk of their money late in their lives. They created foundations that would outlive them, employed highly qualified advisers, and were prepared to dish out funds for decades to achieve their goals.

Move fast and fix things

That model was tweaked at the turn of the millennium. Businessmen and venture capitalists began thinking about charitable donations like hard-nosed investments. Recipients were ranked by which offered the most charitable bang for each buck. The impact of every dollar was measured, and, if a project failed to deliver its expected “social return”, funding was cut. The standard-bearer for that approach was the Bill and Melinda Gates Foundation, started by the founder of Microsoft and his then

▸▸

wife in 2000. It has spent its money, among other things, on malaria prevention, improving access to clean water, and pushing to complete the worldwide eradication of polio.

To the newer generation of philanthropists, raised in a business culture that prizes getting to market and scaling quickly over cautious planning, all this appears unbearably stodgy. Nickhil Jakatdar is a serial entrepreneur from India who now lives in California, and who gives away between $300,000 and $500,000 each year. In 2021 he approached the Gates Foundation seeking funding for a not-for-profit medical firm. The foundation's generosity was impressive, Mr Jakatdar says. But he found the paper-pushing so off-putting that he did not apply. "The Gates Foundation taught me what I don't want to be," he says.

Mackenzie Scott, the ex-wife of Jeff Bezos, the founder of Amazon, became a role model for the new approach when she dished out over $14bn in a little over three years, starting in 2019. Ms Scott did not dispense with analytics entirely. Instead, she front-loaded them. She appointed consulting firms to crunch the numbers and pick worthy recipients, which included Habitat for Humanity International, whose volunteers have built homes in Haiti and Bangladesh, and the Desmond Tutu Health Foundation, which is based in Cape Town. The gifts were mostly given without conditions, with the charities trusted to make the best use of the money. Ms Scott has called her approach "seeding by ceding".

Jack Dorsey, a co-founder of Twitter, runs his charitable efforts on similar lines. In 2020 Mr Dorsey pledged to give away $1bn of shares to his philanthropic venture #StartSmall. He takes grant applications from anyone via a short online form. Every donation is made public. (#StartSmall's list of donations includes climate-resilience projects in the Caribbean and humanitarian aid in Ukraine.) "I'm seeing much more of the attitude of: just give people the money already," says Stephanie Ellis-Smith, the boss of Phila Engaged Giving, an advisory firm. "What are we playing around with, ticking this box and that box?"

This sense of urgency is bolstered by peer pressure and competition. Silicon Valley is brimming with "giving circles" and educational programmes that get would-be donors together. Public declarations are popular, and evangelists are not shy about recruitment. David Goldberg, the chief executive of Founders Pledge, says he physically walks entrepreneurs into the corner of the room at parties, registration papers in hand.

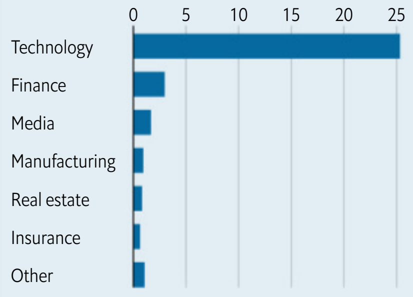
The vehicles through which young tech titans dispose of their wealth are changing, too. America's charitable foundations have over $1trn in assets. But there is a growing fashion for donor-advised funds (DAFs), a sort of savings account for charitable giving that offers a quick and simple way of getting wealth out of the door. The National Philanthropic Trust reckons the value of assets in DAFs rose by nearly 170% in the five years to 2021, to $234bn. One of the biggest providers is the Silicon Valley Community Foundation, which has about $14bn at its disposal. Donors include Brian Acton, a founder of WhatsApp, and Sergey Brin, who co-founded Google.

Technically, donors to a DAF give up control over their money (though their wishes are usually respected). But they can get advice on giving and help with paperwork from the group that runs it. Unlike big foundations, there is no need for DAF donors to hire a large staff or submit detailed reports to the taxman. American foundations must dispose of at least 5% of their assets every year. No such rules apply to DAFs. Donors can get deductions on their tax bills, too. Untraded shares given to a foundation are valued based on what they cost—which, for a founder, is often very little. When given to a DAF, they are valued at the time of the donation.

Another option is the limited liability corporation (LLC). Corporations do not provide the tax benefits of foundations or DAFs. But they give donors freedom. Spending on charitable projects can be combined with for-profit ones, and even political advocacy. Pierre Omidyar, eBay's founder, and Laurene Powell Jobs, the widow of Steve Jobs, a former Apple boss, both use LLCs for their do-goodery. The range of projects that can be funded is on full display at Ms Jobs's group, the Emerson Collective. The philanthropic arm funds projects such as art installations along America's border with Mexico. Meanwhile, the venture-capital arm has made investments in the *Atlantic*, a magazine, and Stripe, a payments-processor.

Benjamin Soskis at the Urban Institute, an American think-tank, says that the popularity of LLCs reflects another widespread Silicon Valley belief, that it is not only charity that can do good in the world. Industrialists like Carnegie and Rockefeller worried that the public viewed the firms that built their fortunes negatively. But entrepreneurs today frame the making of money as being just as worthy as giving it away. Social-media platforms are said to connect people, for example, while online marketplaces democratise shopping.

Some corporate do-goodery can seem strikingly grandiose. Elon Musk, Tesla's boss, sees part of the firm's job as forcing the rest of the car industry to switch to electric vehicles sooner than it otherwise would have (a mission it has, by now, mostly accomplished). Although Mr Bezos remains on Amazon's board, he also owns Blue Origin, a rocketry firm that hopes one day to help humans live in space to relieve environmental pressure on Earth. Mr Brin has invested in Calico, an anti-ageing firm that hopes to extend lifespans. "There is a blurring between entrepreneurship and philanthropy," says Mr Soskis.


Burn rate

United States, charitable giving of biggest 50 donors, by source of wealth, 2021, $bn

Source: *Chronicle of Philanthropy*

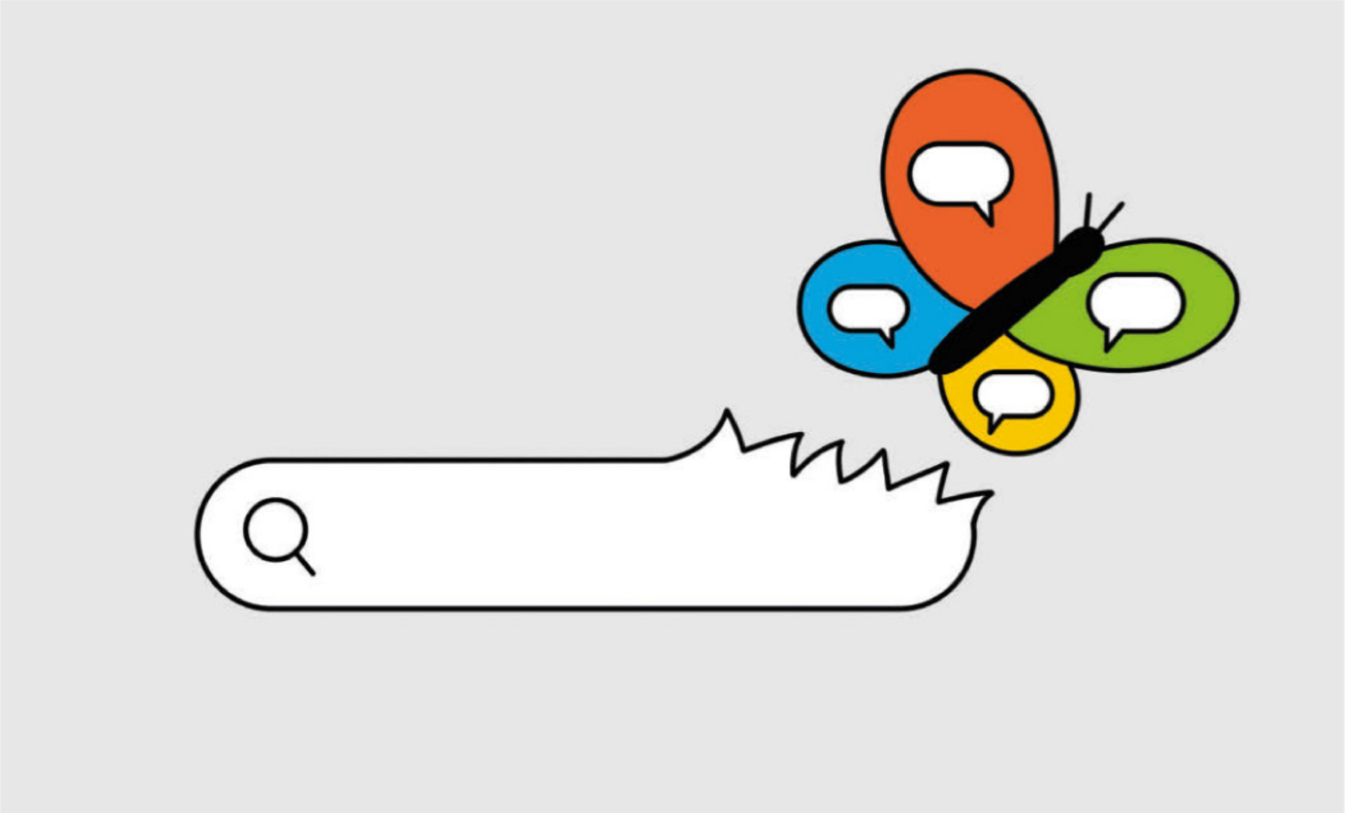
Think different

As the preferences of donors change, so must the fundraising tactics of recipients. It helps if charities have grand ambitions too. Brent Hoberman runs Founders' Forum Group in London, which offers legal advice, networking and more for entrepreneurs. He recalls advising the Tessa Jowell Foundation, a British charity focused on brain cancer, on how best to market itself. To draw donations from tech moguls, he said, it would be better for the foundation to market itself as a "moonshot" project that aimed to cure cancer of all kinds. And there is no harm in asking for big donations, either. "Sometimes it is easier to get these guys to give away $100m than $1m."

It helps to be au fait with tech culture, too. With $700m in donations charity: water, Mr Harrison's venture, is a Silicon Valley darling. Mr Harrison thinks it was the first non-profit group to reach 1m followers on Twitter. Adding whizzy, high-tech elements works as well. Mr Harrison offers donors satellite images of the wells they have paid for. And once one tech donation arrives, others often follow. Michael Birch, the founder of Bebo, a social network, was an early donor. He introduced Mr Harrison to Daniel Ek, the boss of Spotify, and Reid Hoffman, a founder of LinkedIn.

More modest charitable ventures, and those without connections, can find it harder to attract donations. Elise Cutini runs Pivotal, an organisation that supports children in foster care in California. Pivotal helps about 500 young people every year, but, as Ms Cutini puts it, that is not seen as "sexy" by the Silicon Valley crowd. One way to get on the radar, she says, is to appoint tech types to the board, which helps spread the word. "Once you get into that circle a bit, people talk," she adds. "They talk at their cocktail parties." ■

Business



Internet search

Seeking change

MOUNTAIN VIEW AND REDMOND

After 20 years of stagnant monopoly, online search is in for a shake-up

NEAR THE bay in Mountain View, California, sits one of biggest profit pools in business history. The site is the home of Google, whose search engine has for two decades been humanity's preferred front door to the internet—and advertisers' preferred front door to humanity. Every second of every day, Google processes perhaps 100,000 web searches—and, thanks to its clever algorithm, serves up uncannily relevant answers. That power has turned Google into a verb. It also opens up billions of daily opportunities to sell ads alongside the answers to searchers' queries. The results' accuracy keeps users coming back, and rivals at bay: all other search engines combined account for barely a tenth of daily searchers (see chart 1 on next page).

Advertisers pay handsomely for access to Google's users, and are typically charged only when someone visits their website. The revenue of Google's parent company, now called Alphabet, has grown at an average annual rate of over 20% since 2011. In that period it has generated more than $300bn in cash after operating expenses (see chart 2), the bulk of it from search. Its market value has more than trebled, to $1.3trn. It is the world's fourth-most-valuable firm. Unlike Apple and Microsoft, its bigger middle-aged tech rivals, it has felt no real need to reinvent itself. Until now.

The reason for the soul-searching in Mountain View is ChatGPT, an artificially intelligent chatbot designed by a startup called OpenAI. Besides being able to have a human-like conversation, ChatGPT and others like it can draft equally human-seeming poems, history essays, computer code and just about anything else that people write down. UBS, a bank, reckons that since its launch in November ChatGPT has gained around 100m monthly active users, a feat that had taken TikTok, the world's fastest-growing social-media sensation, nine months. Other "generative" AIs can paint, compose or sing. Bill Gates, co-founder of Microsoft, has called the technology "as important as the PC, as the internet".

To Eric Schmidt, who used to run Google, ChatGPT is the "first broadly visible example" of what a human being's AI friend might look like. To his former employer, it is the first broadly visible threat to Google's search dominance. For ChatGPT can also answer the sorts of questions that people might have asked Google. And ChatGPT's creator, OpenAI, has teamed up with Microsoft, which is covetously eyeing Google's gleaming pool of profits.

On February 7th Microsoft, which recently announced an investment of $10bn in OpenAI, showed off how it plans to go after those profits. Results from the software giant's search engine, Bing, will now be accompanied by an AI-generated side box summarising pertinent information. Bing will also get its own chatbot based on OpenAI's models. Microsoft showed off neat tricks, such as making a shopping list based on a week of planned meals. "It is a new day in search," declared Microsoft's CEO, Satya Nadella. Baidu, the top search engine in China, where Google is banned, will launch its own AI-boosted service in March. In a pre-emptive counterattack, ▸▸

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and to steal some of Mr Nadella's thunder, Alphabet this week unveiled its own chatbot, Bard, and has reportedly invested $300m in Anthropic, a generative-AI startup. On February 8th, while presenting some non-chatty AI search features, it confirmed that Bard will be integrated into search within weeks. Investors were unimpressed; Alphabet's share price tumbled by 8% after the announcement.

The battle of the bots is, then, brewing. It will transform the way people find things on the internet. In doing so, it may upend the lucrative business of search.

Online search was last disrupted in its early days, at the dawn of the consumer internet in the late 1990s. As the number of webpages exploded, useful information became harder to find. A number of search engines, such as AltaVista and Yahoo!, made things a bit easier. But it was Google, founded in 1998, that revolutionised the industry. Its algorithm ranked webpages based on the number of other websites linking to them, which turned out to be a good proxy for relevance. Then Google worked out it could display ads related to a search's keywords alongside the results.

In the past few years challengers have emerged. Some are startups offering ad-free subscription search, such as Neeva. Others include Alphabet's big-tech rivals. Amazon, whose e-emporium has become the place where many shoppers start looking for products, has seen its share of the American search-ad market jump from 3% in 2016 to 23% today. Apple's search-ads business, consisting of searches for apps on iPhones, now has 7% of that market, up from nothing a few years. Google's own research shows that two-fifths of 18-to-24-year-olds favour Instagram, Meta's photo-sharing app, or TikTok over Google Maps when searching for a nearby restaurant.

As a result of this ferment, Google's share of revenue from search advertising in America will fall to 54% this year, down from 67% in 2016, according to eMarketer, a research firm. But these challengers never presented an existential threat to Google. The same cannot be said of chatbot-assisted conversational search. After ChatGPT's launch Alphabet's CEO, Sundar Pichai, reportedly declared a "code red".

To understand why Google fears chatbots, first consider the technology behind them. ChatGPT works by predicting the next word in a sentence that is a response to some query. These predictions are based on a "large language model", the result of prior analysis of millions of texts harvested from the internet. Once trained on all this natural language, the chatbot can, when prompted by users' instructions, produce a fluently written answer rather than merely serving up a list of links.

Applied to search queries, this means that responses could in principle contain many more variables. Want to go on a day trip somewhere off the beaten track that is cheap, child-friendly and educational? Unless you chance upon a travel blogpost, today finding a precise answer on Google (or Bing or Baidu) requires comparing dozens of websites and skim-reading tonnes of text. By contrast, ChatGPT spits out a list of decent options in moments. Users can then add extra considerations or ask for more information with follow-up queries.

Changing how people search will, in turn, change what they search for. As well as seeking existing information, users can use conversational search to generate original content. ChatGPT writes poetry and essays—in the style of your favourite author, if you wish. On January 26th Google published a paper describing MusicLM, a new large language model that can make music from text. GitHub, a Microsoft-owned platform which hosts open-source programs, has a chatbot called Copilot that can churn out lines of code. That opens up all-new search-adjacent markets, says Mark Shmulik of Bernstein, a broker, most immediately in productivity tools for businesses (like helping desk jockeys write presentations).

A little more conversation

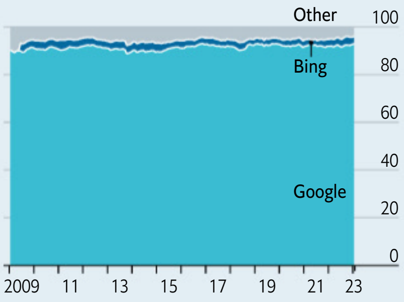
As a new area, conversational search is attracting hopeful newcomers, buoyed by the prospect of an expanding market for search and generative content. "When I started two years ago, people said I was crazy. Now the sentiment has massively shifted," says Richard Socher, founder of You.com, a startup which offers an AI-powered search chatbot. Neeva has also added a chatbot to its subscription search. Sridhar Ramaswamy, its co-founder, hopes this will help it reach 5m-10m subscribers, up from almost 2m today (not all of them paying customers), and become financially self-sustaining. C3.ai, a business-software firm, has brought out a chatbot to help companies search their in-house data. Travel firms, including Booking.com, are toying with chatbots, too.

Let me Google that

Search engines, monthly share of global queries

%

1

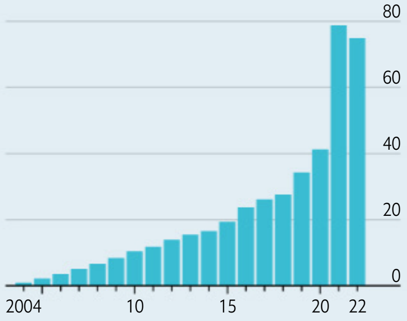


Source: StatCounter

Magic Mountain View

Alphabet, operating profit, $bn

2



Source: Bloomberg

The most serious threat to Google comes from Microsoft. Mr Nadella's firm already has the infrastructure, including oodles of computing power, storage systems and armies of web-crawling programs that constantly scrape information from the internet. Setting all this up from scratch to compete with Google would, according to one estimate by the Competition Markets Authority, a British trustbusting agency, cost between $10bn and $30bn.

At present Bing's share of America's search-advertising market is a measly 5% (see chart 3 on next page). Microsoft hopes that its new bag of tricks will change that. The company seems to have fixed some of ChatGPT's shortcomings. One was keeping the bot up to date. ChatGPT's underlying AI, called GPT-3.5, has been trained on data from 2021 and has no inkling of anything on the internet after that point. Ask it about recent news or today's weather forecast and you get an apology. Bing's AI, by contrast, decides how to gather the most relevant information and then uses search tools to find it. The data are then fed back into the model, which uses them to compose a fluent answer. Other firms, including Neeva, are using this method, too.

This in turn has helped Microsoft tackle a bigger problem: large language models' tendency to make stuff up. Chatbots have no sense of what is true or false; they reflect what is on the internet, warts and all. These authorititive-sounding "hallucinations", in computer-science speak, are innocuous when the chatbot is used for fun and games. When it is meant to give real answers to serious questions, they are a fatal flaw. Last year Meta had to take down its science chatbot, Galactica, after it was found to be spouting scientific nonsense.

Giving the model access to up-to-date data has reduced, though not eliminated, the hallucinations rate for Bing's chat feature. "A lot of the hallucinations were [the model] trying to fill in the blanks on things that had happened since the end of its training data," explains Kevin Scott, Microsoft's chief technology officer. His firm is using other techniques to lower the rate further. These include having humans tell the models which answers are better and what information is reliable; adding memory to the systems, so that the algorithms learn from the conversations, which they currently do not; and posting links to sources in the AI-generated responses. Mr Schmidt similarly expects chatbots to have fully sobered up within a year or two.

Solving the technological problems is only the first step to dislodging Google from the search pedestal. No less knotty is working out how conversational search will make money. Start with the costs, which for chatbots remain high compared with conventional search. Brian Nowak of Morgan Stanley, a bank, estimates that serving up an answer to a ChatGPT query costs roughly two cents, about seven times more than a Google search, because of the extra computing power required. He reckons every 10% of Google searches that shift to AI by 2025 will, depending on the number of words in an average response, add between $700m and $11.6bn to Google's operating costs, equivalent to between 1% and 14% of such spending in 2022.

To complicate matters further, many costly conversational-search queries will generate little ad revenue. Google has said that 80% of its search results do not contain lucrative ads at the top of the search results. Many of these ad-light searches are almost certainly "informational" ("what is the capital of Spain?"), precisely the sort of query where chatbots are most useful—and precisely the sort that advertisers are least interested in (it is hard to know what ad to place next to the word "Madrid"). For generative AI to make real money, it must find uses in "navigational" searches (looking for a site's internet address by its name) and especially "commercial" ones ("Best new ski boots this season").

Some companies, like Neeva, earn revenue from subscriptions. On February 1st OpenAI began signing up subscribers to the current version of ChatGPT. For $20 a month users get faster responses and access at peak times. OpenAI also plans to license the technology to other firms. But the big bucks are likely to lie in advertising.

Embedding ads in what is meant to feel to a user like a normal conversation will require deftness. One possibility is to display fewer adverts but charge advertisers more for each, says Mr Nowak. A chatbot is likely to offer up only a few suggestions in response to a search query about, say, blissful Hawaiian hotels. Hoteliers may be happy to pay more to ensure that theirs are among those suggestions, or displayed next to them. Microsoft says that it plans to test such a model in the new-look Bing.

Microsoft may be betting that its chatbot-assisted informational search will lure new users, who will then use Bing for the more lucrative queries as well. This could mean sacrificing margins, at least until costs can be brought down. It would only be worth it if they can wrest sizeable market share from Google. Microsoft expects that for every percentage point of market share they gain in search, its annual advertising revenue will grow by $2bn.

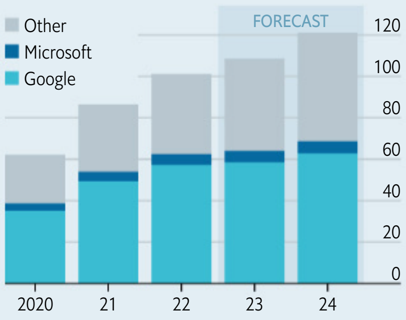
That is possible—but not guaranteed. Alphabet retains formidable strengths. One is technology. Although Google has yet to integrate generative AI into its search engine, it has deployed other AIs in its search business for years. When it highlights a web-page snippet at the top of the search results, that is courtesy of models such as Bert and Mum. All this is "only possible because of the foundational research we've done in AI for more than a decade", says Liz Reid, Google's head of search. Despite a launch-day gaffe, when it misidentified the first telescope to photograph a planet outside the solar system, Bard is likely to be no less impressive than ChatGPT. The stumble vindicated, in an ironic way, the company's stated reason for its foot-dragging: a fear about unleashing a chatbot that spewed inaccurate content.

Google's other advantage is incumbency. It is the default search engine in Chrome, Alphabet's browser, which is used by two in three people on the internet, according to StatCounter, a research firm. It is also the go-to search on more than 95% of smartphones in America. And the firm pays Apple $15bn or so a year to make its search the default on Apple's devices and Safari, which accounts for 19% of browsers installed on desktops and devices.

Yet this position of strength also brings weaknesses. It is hard for Alphabet to move fast with regulators breathing down its neck over alleged monopolies and misinformation on its various platforms. It may be even harder for the company to let go of a technology and business model that has pumped out profits consistently for 20 years. Mr Pichai may yet work out how best to resolve this "innovator's dilemma". Mr Nadella must be hoping that before he does, Bing, too, will have become a verb. ■

Can Bing bring it?

United States, search-advertising revenues, $bn



Source: eMarketer

Business in Brazil

Three is a cloud

SÃO PAULO

Alleged fraud at a Brazilian retailer sparks a corporate reckoning

BRAZILIAN BUSINESSPEOPLE are not easily shocked. In the past decade they have seen two business empires collapse in ignominy. Eike Batista, for a time Brazil's richest man, lost his ports-to-mines group amid charges of bribery and market manipulation (for which he was briefly jailed). Marcelo Odebrecht, the scion of a construction dynasty, went to prison over the "Big Oily" graft scheme centred on Petrobras, the state oil giant.

The latest scandal erupted on January 11th, when the new boss of Americanas, Sergio Rial, reported "accounting inconsistencies" that had allowed the 94-year old retail giant to hide 20bn reais ($4bn) of debt over a decade. Correcting the error swelled the firm's debt to 43bn reais. Its shares lost 94% of their value. On January 19th it filed for bankruptcy. Mr Rial quit; his predecessor, who had run the firm for 20 years, is apparently nowhere to be found. Several creditors cried fraud.

Though modest next to the Odebrecht and Batista imbroglios, the episode struck a nerve. That is because 31% of Americanas is owned by three heroes of Brazil Inc. Jorge Paulo Lemann, Carlos Alberto Sicupira and Marcel Telles gained fame after 3G Capital, the private-equity firm they founded in 2004, sealed deals to win control of global behemoths including AB InBev, the world's biggest brewer; Kraft Heinz, one of its biggest food producers; and Restaurant Brands International, owner of, among other chains, Burger King. Their "3G way", which combined Walmart-like ruthless cost-cutting, GE's "rank and yank" approach to personnel and Goldman Sachs-style performance-based pay, was admired and aped the world over. Their preference for quiet philanthropy over Batista-like flamboyance added to the mythos.

Now aggrieved Americanas lenders, including BTG Pactual, an investment bank, are asking how much the trio, who invested in the firm in a personal capacity, knew. (3G owns no stake in Americanas and has not commented.) Brazil's president, Luiz Inácio Lula da Silva, has likened Mr Lemann to the disgraced Mr Batista. Many others quietly wonder how the scheme could have gone unnoticed for so long.

On January 22nd the trio issued a statement categorically denying any knowledge of "accounting tricks or dissimulation" and pointing out that the share-price drop meant they, too, were victims. Americanas ▸▸

is a small part of their portfolios and they had not been involved in its day-to-day operations in years. In their role as investors, they have put in three times as much equity into the business as they have taken out in dividends over the past ten years.

That may be so. Still, the case casts a shadow on the 3G way, which some see as incentivising corner-cutting or worse. A few 3G companies have faced allegations of accounting irregularities, some of which resulted in settlements. After 3G sold América Latina Logística, a logistics firm, the buyer republished the previous two years' balance-sheets to correct the exclusion of some debts to suppliers and other costs. Such revisions are not unheard of given Brazil's Byzantine accounting rules, but not a good look. In 2021 Kraft-Heinz, in which 3G then owned a 17.6% stake, paid $62m to settle a case in which America's Securities and Exchange Commission accused it of inflating profits. Miguel Patrício, CEO of Kraft-Heinz, says this was a "minor mistake" and not part of any pattern with 3G businesses; Kraft Heinz, he says, has increased controls. 3G did not respond to *The Economist*'s requests for comment.

The fate of the trio's reputation may now hinge on what exactly happened at Americanas. The company's interim management and its shareholders are on the case. So is Brazil's markets regulator. PWC, which had signed off on the company's last full set of accounts in 2021, declined to comment on any aspect of the case. Until the air is cleared, Messrs Lemann, Sicupira and Telles may, fairly or not, face frustration and anger from those who fear the scandal tarnishes Brazilian business's global reputation—and disappointment from their remaining fans. ■

Bartleby The fashion for passion

The pitfalls of loving your job a little too much

Back in the dim and distant past, job candidates had interests or hobbies. Those interests could be introspective: reading a book was a perfectly acceptable way of spending your spare time. No longer. Today you will probably be asked if you have a "personal passion project", and the more exhausting your answer sounds, the better. Go white-water rafting, preferably with orphans. Help build motorway crossings for endangered animals. If you must read, at least do so in the original.

Passion is becoming a staple for workplace success. A new piece of research from Jon Jachimowicz and Hannah Weisman of Harvard Business School includes an analysis of 200m job postings in America. It finds that the number which explicitly mention "passion" rose over time, from 2% in 2007 to 16% in 2019.

Career websites offer helpful advice on how to come across as passionate about deeply ordinary pursuits. Here is a suggestion from one site on how to talk to prospective employers about putting things into an oven. "I love the process of researching new recipes and testing them out. I've been writing up my experiences with baking for the past three years...I'm very detail-oriented, and love the scientific aspects of baking. However, I'm also a very social person, and use my baking as a chance to get together with friends and family." Do not say: "I just really like cake."

Once inside an organisation, passion for the job also seems to be a good way to get ahead. Another paper by Mr Jachimowicz, along with Ke Wang of Harvard Kennedy School and Erica Bailey of Columbia Business School, found that employees who were regarded as more passionate than their peers got more positive feedback as well as more promotion and training opportunities. Other research has found that workers who cry at work are more highly regarded if they attribute these displays of emotions to caring too much.

On the surface the fashion for passion makes sense. Better, surely, for an employee to be enthused than not. Most workers want to do a job they love; most companies want a workforce that is committed and motivated. The case for unbridled energy is particularly strong for certain types of companies. There is a reason why startups do not embrace the cult of the occasionally interested founder.

But passion can also warp judgment. For firms, the obvious pitfall is rewarding commitment over competence. Just as that note-taking, detail-orientated baker could be churning out the world's most disgusting profiteroles, the super-keen employee who volunteers for everything may not be that great at their job. The paper by Mr Jachimowicz, Mr Wang and Ms Bailey finds that passion may indeed be blinding managers to reality: it finds that even when the performance of passionate employees is on the downward slope, they are still more likely to be given promotions than taciturn peers.

Dangers also lurk for employees. Even if commitment is heartfelt, passion comes in different varieties, some better than others. Psychologists distinguish between harmonious passion, in which people engage in an activity because they genuinely enjoy it, and obsessive passion, a more compulsive behaviour in which people feel like they are not really in control of themselves.

One obvious pitfall stands out. There are only so many ways to communicate passion. Widening your eyes and nodding wildly: too weird. Jumping, whooping and sweating: even weirder. Working ever longer hours, on the other hand, is a fairly simple way to show that your commitment is beyond question.

Some evidence suggests that employers feel justified in exploiting that fact. A survey by academics at Duke University, the University of Oregon and Oklahoma State University found that people thought it was more legitimate to ask passionate workers than disengaged ones to work for no money and to miss time they were meant to be spending with their families. They are also more comfortable with the idea of asking passionate employees to do totally unrelated tasks. People apparently believe that if you love your job, you will enjoy cleaning the office toilets more than people who are less enthused by it.

It is great to feel passion for your job. But if you are up at 4am for a meeting with Asia, constantly working on your holiday or have just been handed a bottle of bleach and a mop by your boss, you are in the grip of something that is not entirely healthy.

Energy

Big oil’s new map

NEW YORK

Where on Earth are the West’s oil giants spending their $150bn profit bonanza?

Towards the end of the second world war Franklin D. Roosevelt attended a fateful gathering of world leaders that helped determine the course of geopolitics for decades. No, not the Yalta summit. Immediately after FDR, Churchill and Stalin had carved up the world into spheres of influence, the American president slipped away onto an US Navy vessel to meet quietly with Abdel Aziz ibn Saud, king of Saudi Arabia. In return for protection of the Sauds’ sovereignty in the Holy Land, the monarch agreed to grant American oil firms access to his country’s petroleum.

Building on the long-standing exploitation of Persian reserves by the Anglo-Persian Oil Company (now BP), the Saudi-American alliance formed the axis of oil that led Western majors to look longingly first to the Persian Gulf, then to other distant longitudes. For decades the world’s five biggest private-sector oil companies—America’s ExxonMobil and Chevron, Britain’s BP and Shell, and France’s TotalEnergies—have drilled from South America to Siberia. Now a swirl of geopolitical, economic and environmental factors is leading these “supermajors” to increasingly look not east and west but north and south.

This realignment comes as big oil’s coffers are overflowing after two years of sky-high energy prices (see chart on next page). On February 2nd Shell unveiled annual net profits for 2022 of $42bn, more than double the figure a year earlier and its highest in over a century as a public company. That came on the heels of ExxonMobil’s announcement of a record annual net profit of $56bn. Its main domestic rival, Chevron, reported that its own net profit more than doubled, to $37bn. BP and TotalEnergies added to the haul on February 7th and 8th, respectively.

All told, those five supermajors raked in around $150bn in profits last year and could make as much again in 2023. A slug of this bounty will flow to shareholders; in January ExxonMobil said it would fork over a cool $35bn in total to its owners this year and next. Some of the proceeds will go to paying down debt. Much of the rest will, though, be reinvested.

After several years of repressed investment in oil and gas, the result of pandemic-induced demand destruction and climate-related policy hostility, big oil is once again spending to find oil and dig it out of the ground. S&P Global, a research firm, estimates that worldwide upstream capital expenditure for the industry as a whole, including private-sector majors and national oil companies, was around $450bn last year, up from a 15-year low of $350bn or so in 2020. This year it may be higher still.

Latitude shift

All this new money is not flowing to the same old places. The West’s oil titans are experiencing “a fundamental shift in thinking”, says Edward Morse of Citigroup, a bank. American companies are beating a retreat from faraway “frontier” areas that are rich in political risk, lack the infrastructure to get hydrocarbons to market as cleanly as possible, or both. Their less risk-averse European rivals are shunning some of their own American projects in favour of Africa, with potential for climate-friendlier new developments. In both cases, the upshot is a realignment of the oil business along lines of longitude.

For the American supermajors, this means less interest outside the Americas. ExxonMobil has, like most Western firms, left Russia after its invasion of Ukraine. It has also offloaded—or wants to offload—assets in countries such as Cameroon, Chad, Equatorial Guinea and Nigeria. Chevron has sold projects in Britain and Denmark (as well as Brazil) and has not renewed expiring concessions in Indonesia and Thailand.

James West of Evercore, an investment bank, sees Chevron and ExxonMobil shifting a huge amount of capital spending to South America and the United States itself. ExxonMobil is investing heavily in newfound fields in Guyana. Chevron intends to funnel more than a third of its capital expenditure this year to American shale, and another 20% to the Gulf of Mexico. Last month it also, with President Joe Biden’s blessing, restarted trading some crude from Venezuela, a dictatorship that had long been on America’s naughty list.

The European oil giants are also reducing their eastern and western exposure. BP and Shell are, like ExxonMobil, quitting Russia, leading to write-downs of as much as $25bn and $5bn, respectively. Shell has also got rid of its shale assets in Texas and reportedly put a few in the Gulf of Mexico up for sale. BP is divesting its Mexican oil assets, and is expected to get out of Angola, Azerbaijan, Iraq, Oman and the United Arab Emirates. TotalEnergies is pulling out of Canada’s oil sands.

Instead, the Europeans’ gaze is, as with their American rivals, turning south. In January Claudio Descalzi, boss of Eni, an Italian non-super major, called for Europe to look to Africa as it seeks to replace Russian energy. Such a “south-north axis”, he argued, would boost Europe’s access to traditional fossil fuels, as well as to cleaner alternatives like renewable energy and hydrogen (which could be shipped or piped north). On January 28th Eni announced it had signed an $8bn natural-gas deal with Libya’s state-owned National Oil Corporation (which includes a bit of money for carbon capture and storage). Shell and Equinor, Norway’s state oil firm, signed an agreement with Tanzania to build a $30bn liquefied natural gas (LNG) terminal in the east African country. TotalEnergies is investing in gas projects in Mozambique and South Africa.

There are two main reasons for this realignment. The first, a chief preoccupation

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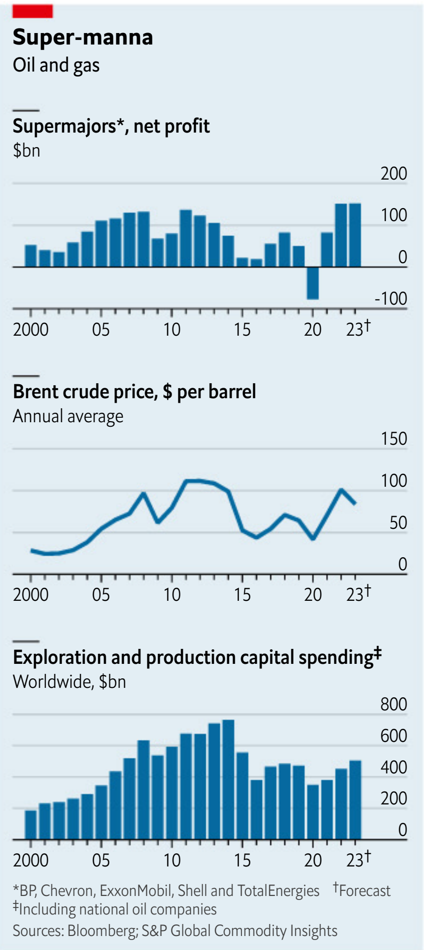


Super-manna

Oil and gas

*BP, Chevron, ExxonMobil, Shell and TotalEnergies †Forecast
‡Including national oil companies
Sources: Bloomberg; S&P Global Commodity Insights

of the Americans, has to do with risks and returns. In previous eras of high oil prices oil bosses spent, in the words of one, “like drunken sailors”. Too much investment and not enough cost control in the go-go years led to huge waste and overproduction. In the years before the covid-19 pandemic, oil projects from the Caspian Sea to the Permian basin lost billions of dollars. Tens of billions more in shareholder value went up in smoke.

These days investors are demanding much greater capital discipline from oil bosses. And the bosses are listening. The industry’s combined capital spending, though up from its recent trough, is still down from a peak of nearly $800bn in 2014. As for the money that the supermajors are spending, it is being deployed more judiciously. Most of it is going into “short-cycle” investments, which generate a return within five years rather than ten or more. “I’ve been in this industry since the 1990s and I’ve never seen this much focus on efficiency,” marvels Julie Wilson of Wood Mackenzie, a consultancy. This quest for efficiency means fewer risky bets in inhospitable places like the Arctic or the deep ocean floor and more projects in familiar jurisdictions with less daunting politics and geology.

For the American firms, of course, nowhere is more familiar than the United States. They also understand South America. And parts of their backyard they know less well, like Guyana, whose long-rumoured oil riches were only confirmed in 2015, may also be, counter-intuitively, less politically risky in important ways. Unlike their peers in many resource-cursed autocracies, who cannot imagine a future without oil, politicians in places with newly discovered resources are more cautious about their prospects. As a result, they tend to offer more favourable terms to oil companies in order to get hydrocarbons to market faster; in Guyana, ExxonMobil moved from first deepwater oil discovery to production in just a couple of years.

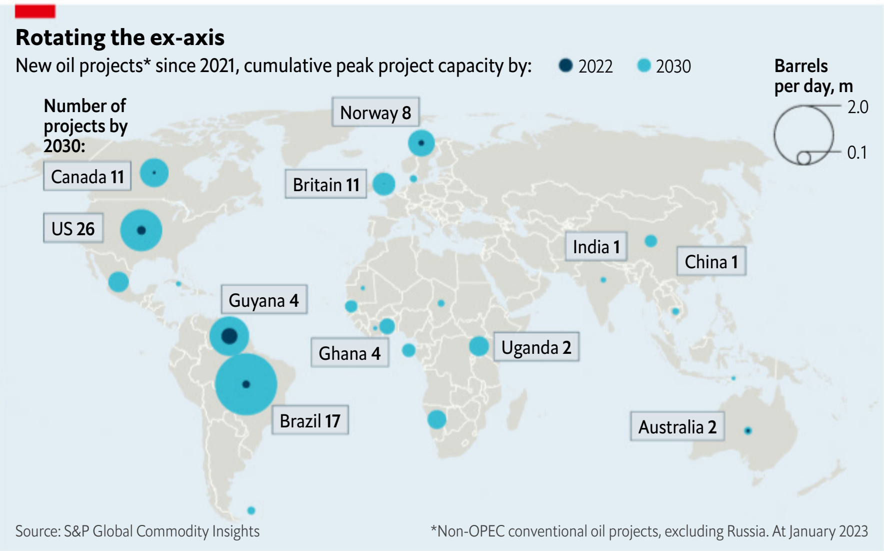
For the Europeans, African countries, which often maintain reasonable relations with their former colonial powers, look appealing for a similar reason. As for their retreat from America, European firms are becoming uneasy about their association with America’s oil industry, with its unapologetically brown reputation. In 2021 TotalEnergies withdrew from the American Petroleum Institute because of the lobby group’s opposition to electric-vehicle subsidies, carbon pricing and tougher rules on emissions of methane, a potent greenhouse gas.

In doing so, the European firms are responding to growing pressure from consumers, policymakers and investors to start decarbonising their portfolios—the Europeans’ big reason for the geographical sorting. They are looking for new places to invest because such investments, which use the latest technology, tend to be more efficient and less carbon-intensive than legacy assets that rely on leakier, ageing infrastructure. Moreover, oil companies, especially in Europe, are looking beyond fossil fuels. James Thompson of JPMorgan Chase, a bank, has found that the historical correlation between high oil prices and high capital spending on oil and gas has broken down for 11 big private-sector energy giants—a phenomenon he puts down in part to the majors pouring more money into low-carbon projects.

Such projects are indeed mushrooming, particularly among the European firms—and in many of the same places as their new hydrocarbon ventures. Last May Eni struck a deal with Sonatrach, Algeria’s state oil firm, to develop green hydrogen from renewable sources. BP is doing the same in Mauritania and TotalEnergies has backed renewable-energy production in South Africa. Looking north, last year Shell paid nearly $2bn for Nature Energy, a Danish producer of “renewable” natural gas (RNG) made from things like agricultural waste. Oswald Clint of Bernstein, a broker, predicts “an era of giga-mergers” in green energy led by the European giants. Last year alone the oil majors signed 22 renewables deals, the five biggest of which added up to $12bn. Mr Clint reckons that in 2030 the European majors could, all told, be spending roughly half their capital expenditure on low-carbon initiatives.

Vertical integration

The supermajors’ north-south realignment is far from complete. BP is still making some investments in the Gulf of Mexico and in December completed its $4.1bn purchase of Archaea, an American maker of RNG. Shell and TotalEnergies are betting on Qatari LNG. ExxonMobil is doubling down on a gas project in Mozambique. Chevron is expanding an oil project in Kazakhstan and, reportedly, reviving talks with Algeria’s government about the country’s vast shale reserves. But these ventures increasingly look like exceptions rather than the rule. The future of energy exploration looks much leaner, a bit greener—and a lot more longitudinal. ■



Rotating the ex-axis

New oil projects* since 2021, cumulative peak project capacity by: ● 2022 ● 2030

Source: S&P Global Commodity Insights

*Non-OPEC conventional oil projects, excluding Russia. At January 2023

Schumpeter | On Schumpeter on Apple

What would the father of creative destruction make of the iPhone-maker?

There is an inconvenient truth about Joseph Schumpeter, patron saint of this column. As an economist, his biggest contribution was to single out entrepreneurs as core to the business cycle. Early in his career he made champions of them, describing them as swashbuckling iconoclasts who overthrow the existing order motivated by sheer chutzpah. Yet later in life, when he coined his famous term "creative destruction", he applied it not to such individuals but to industrial behemoths, even monopolies. They were compelled to innovate in order to "keep on their feet, on ground that is slipping away from under them", he wrote. A far cry from the entrepreneurial heroes of his youth.

In his new book, "The Entrepreneurs", Derek Lidow puts this into historical context. When the young Schumpeter wrote "The Theory of Economic Development" in 1911, it was at the end of a long period of unfettered enterprise during the first century of the Industrial Revolution. But in the run-up to the second world war, when Schumpeter wrote his most famous work, "Capitalism, Socialism and Democracy", the buccaneers of yore had morphed into large conglomerates with vast research-and-development (R&D) labs in which they invested fortunes to remain competitive.

That is a useful way to understand Apple, maker of the iPhone. What was once a scrappy startup with visionary co-founders keen to change the world has become the world's largest corporation, worth $2.4trn, with 2bn devices in active use and a line of high-margin services to support them. Some worry that its size has sapped its inventive mojo, made it too big for its boots, and left it overexposed to China. On February 2nd it reported its first decline in year-on-year earnings in three and a half years. Yet it is still a profit-making juggernaut and continues to pour money into innovation: R&D in the quarter jumped to 6.5% of sales, up from 5% a year earlier. What would Schumpeter have made of the company that so neatly encapsulates both sides of his thinking?

No doubt the young Schumpeter would have been fascinated by the late Steve Jobs, Apple's co-founder. Jobs was uniquely gifted, or as Schumpeter would have put it, a "Caruso" (after a great Italian tenor of his time). Schumpeter drew up a checklist of ways to create new "combinations", as he called entrepreneurial firms; Jobs used many of them. He created new goods (Macs, iPods, etc), a new method of production (the Cupertino-to-China supply chain) and new markets (the app economy). To start with, he also met huge resistance, as Schumpeter's theory predicted he would.

Fast forward to today and Schumpeter would probably acknowledge Tim Cook, Jobs's successor, as a top-notch manager, if not quite a Carusoesque entrepreneur. Some critics complain that under Mr Cook, Apple has not created a product as original as the iPhone. But, as Horace Dediu, an expert on Apple, points out, it relentlessly improves, refines and shrinks its components, which has given rise to new gadgets like the Apple Watch and AirPods.

This year, such micro-innovations, combined with lasers, better cameras and increased energy efficiency, are expected to come together in the launch of a new Apple device, a mixed-reality headset. Such developments, says Mr Dediu, are not about "eureka moments". They are about turning new technologies into products that eventually will be accessible to millions. In pursuing them, Apple has become just the sort of big-business innovation engine that late-in-life Schumpeter admired and perceived as best-placed to produce revolutionary change.

To be sure, Apple might flinch at the comparison. After all, when Schumpeter talked about the large companies he looked up to, he explicitly referred to monopolies—a loaded term, especially in big-tech circles. Antitrust is a fetish of Joe Biden's administration. It has recently brought a big case against Google, lost one to Facebook's owner, Meta, and is reportedly preparing one against Amazon. Mr Cook's rivals, including Meta's Mark Zuckerberg, complain of Apple's dominance, including restrictions on the use of its App Store, as well as on tracking technologies used by digital-ad companies. Apple remains in an appeals-court battle with Epic, a games developer, in a competition case over App Store charges. Though Facebook and Google get most of the antitrust attention, so much of their content depends on Apple's platforms that some describe it as the 800-pound gorilla in the background.

To Apple, this is all nonsense. Its App Store policies protect its users from fraudsters, hackers and the like, it has said. Its ad-tracking restrictions protect privacy. Yet Schumpeter, were he alive today, might offer a more high-level defence. For one, he ridiculed the notion of perfect competition altogether. More significantly, he believed that creative destruction blew through the economy like a perennial gale, destroying old structures and building new ones. That left no one safe from disruption. As he put it, even a monopoly was "no cushion to sleep on".

Apple may look invincible. But does it, too, feel the risk that the rug could be pulled from under its feet? It doesn't need to look far to see how the chatbot battle between Microsoft and Google has swiftly raised questions about the future of Google's search business. Even ChatGPT, Microsoft's weapon in the fight, could not describe creative destruction with more Schumpeterian eloquence.

Capitalism, Socialism and Chinese Communism

Advanced artificial intelligence poses a challenge to Siri, Apple's voice assistant, but not a direct threat to Apple itself. More serious is something that goes beyond creative destruction. It is Apple's vast, and vitally important, supply chains in China, from which it will struggle to extricate itself as Sino-American relations deteriorate. Apple is playing it carefully; Mr Cook balances his firm's exposure to China with grand investment promises in America. But Apple's big Chinese presence is a danger nonetheless. Schumpeter, who spent the last years of his life musing, erratically, about the dark future of capitalism, would have sympathised. ■

The reopening

A beating heart

China's economy is recovering from zero-covid much quicker than expected

During China's recent lunar-new-year holiday, tourists flocked to the sprawling Taihao mausoleum in Henan province. Many enjoyed slapping a statue of Qin Hui, a scheming official in the Song dynasty who is notorious for having framed a military hero. One visitor got a little carried away, striking the statue with the lid of an incense burner. Feelings are running high after Qin's villainy featured in a new film, "Full River Red", which topped the box-office charts during the holiday.

This enthusiastic moviegoing, sightseeing and statue-slapping is evidence of a surprisingly rapid consumer revival in the world's second-biggest economy. The mausoleum says it received 300,000 people in the festive period, the most to have visited in three years. Box-office revenues were not only better than last year, they were also higher than in the year before covid-19 struck. China's population, subject until recently to mass screening, is now massing at the screens.

The recovery is arriving earlier than expected because the virus spread faster. Since China hastily abandoned its zero-covid regime, infections appear to have passed remarkably quickly. State epidemiologists estimate that at least 80% of the population has already caught the disease. According to official figures, hospital inpatient numbers peaked on January 5th. A second wave of infections was expected after holiday travel spread the disease from cities to villages. But the virus beat the festive rush. The much-feared second wave appears to have merged with the first, reckons Airfinity, a life-sciences data firm.

Although the death toll from all these infections is unknown, the economic aftermath is becoming clearer. As people have caught and recovered from the virus, China's service economy is returning to life. An index of activity outside the manufacturing sector, based on monthly surveys of purchasing managers, jumped from 41.6 in December to 54.4 in January, the second-biggest leap on record. Xiaoqing Pi and Helen Qiao of Bank of America note that activity in the service sectors "battered by the pandemic", such as retail, accommodation and dining, has risen sharply.

On Meituan, an e-commerce platform, some restaurants have amassed waiting lists 1,000 tables long. People used to queuing for PCR tests now wait to pray at popular temples. In Hangzhou, the capital of Zhejiang province, people gathered outside the Linshun temple at 4am to light incense for the God of Wealth. Others who reached the top of the spectacular Tianmen mountain in Hunan province, famous for its vertiginous glass walkways, were forced to to wait until 9pm to catch a cable car back down, according to the *National Business Daily*, a state newspaper.

Can this frenetic pace be sustained? Optimists point out Chinese households are unusually liquid. Their bank deposits now exceed 120trn yuan ($18trn), over 100% of

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last year's GDP, and 13trn yuan more than might have been expected given pre-pandemic trends, according to Citigroup, a bank. These deposits could provide ammunition for a bout of "revenge spending".

Yet the ammunition may be set aside for other purposes. Much is composed of money that nervous households kept in the bank rather than using to buy property or ploughing into a mutual fund. They are unlikely now to lavish it on goods and services. More likely, reckons Citigroup, is a bout of "revenge risk-taking", as households gain confidence to buy assets that are less safe but potentially more rewarding than a bank deposit. This would lift financial markets and give a much-needed boost to property.

Perhaps a more accurate way to assess the forthcoming spending boom is therefore to look at the gap between household income and consumer spending. In the three years before the pandemic, households saved 30% of their disposable income. During the pandemic they saved 33%. The cumulative result of this extra saving is about 4.9trn yuan. If consumers added that to their spending this year it would increase their consumption by 14% (before adjusting for inflation).

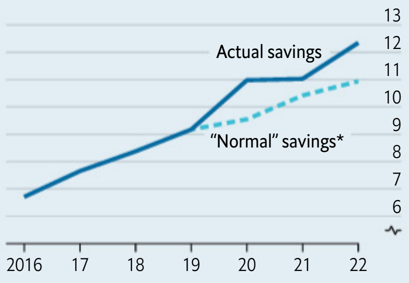
The exact size of the spree will ultimately depend on broader economic conditions. Property prices have fallen and the job market is weak. Youth unemployment is still above 16%. But China's labour market has bounced back quickly after previous covid setbacks, and jobless youngsters count for only about 1% of the urban labour force. With luck, a bit of extra spending will result in higher sales and stronger hiring, in turn motivating additional spending. All this means consumption could account for the lion's share of China's growth this year: almost 80%, according to Citigroup, if government spending on services is included. This would be the highest share for more than two decades.

China's splurge will make a welcome contribution to global growth. According to the IMF's forecasts, released on January 30th, the country's economy will grow by 5.2% this year, accounting for two-fifths of the expansion in the world economy. Together, America and the euro area will contribute less than a fifth.

The rainy day arrives

China, average annual savings per person

'000 yuan

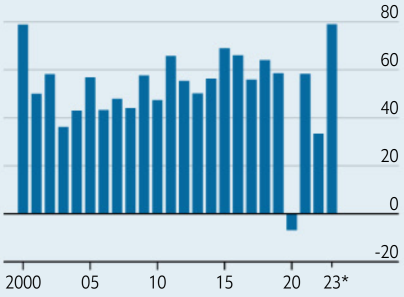


*Pre-pandemic average rate

Source: National Bureau of Statistics

Back with a vengeance

China, consumption's contribution to GDP growth, %



Sources: Citigroup; National Bureau of Statistics *Forecast

A recent study by economists at America's Federal Reserve makes a basic point with its title: "What Happens in China Does Not Stay in China". Their estimates suggest a policy-induced expansion in China's GDP of 1% adds about 0.25% to the rest of the world's GDP after a year or two. The authors do not examine spillovers from China's reopening. But their results give some indication of the possible consequences. If China's reopening lifts the domestic growth rate from 3% to 5-6% this year, the spillover effects may be 0.5-0.75% of the rest of the world's GDP, or about $400bn-600bn at an annualised rate.

An uptick in global growth would not be an unalloyed good, however. Central banks are still attempting to quash inflation. If higher Chinese demand adds to price pressures, policymakers may feel obliged to slow their economies by raising interest rates or delaying cuts. Lael Brainard, vice-chairwoman of the Fed, has noted that China's abandonment of zero-covid has uncertain implications for global demand and inflation, especially in commodities. Christine Lagarde, head of the European Central Bank, has warned the reversal will increase "inflationary pressure", because China will consume more energy. According to Goldman Sachs, another bank, reopening could add $15-21 to a barrel of Brent crude oil, now trading at around $85.

After the Asian financial crisis in 1997, the Chinese economy helped to stabilise the region. After the global financial crisis a decade later, China's growth helped to stabilise the world. This year it will once again make the single biggest contribution to global growth. But whereas in the past China's contribution came from investment spending, now consumption will take the lead. Chinese consumers, who traditionally punch below their weight, are about to hit a lot harder. ■

Property (1)

Home truths

SEOUL

South Korea's housing crunch offers a warning for other countries

"BUYING THE house in 2021 might be one of the biggest regrets of my life," says Kim Myung-soo, a 33-year-old whose home in Jamsil, eastern Seoul, has fallen in value by about $400,000. His wife is 33 weeks pregnant and Mr Kim does not know how he will repay the mortgage. He had planned to wait for prices to rise before selling the property to pay off the loan.

Mr Kim is not alone in his worries. Across the rich world, property markets look precarious. Few are in as bad shape as South Korea's. House prices fell by 2% in December alone, the biggest monthly drop since official figures began in 2003. The slump has been particularly brutal for apartments in Seoul: prices are down by 24% since their peak in October 2021.

South Korea's market offers a glimpse of what may lie ahead elsewhere. The Bank of Korea (BOK) began raising interest rates in August 2021, seven months before the Federal Reserve and almost a year ahead of the European Central Bank. The benchmark rate now sits at 3.5%, a 14-year high, after officials raised it once again in January.

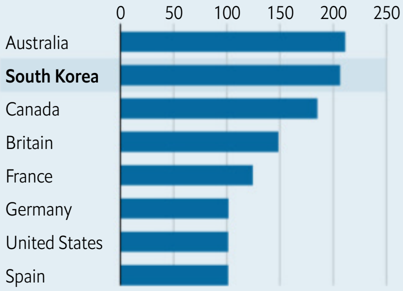
The broader economy is feeling the pinch. Private consumption fell by 0.4% in the fourth quarter of 2022. And exports, which dropped by 17% year-on-year in January, have hardly cushioned the blow. They were hit by a collapse in semiconductor orders at the end of a pandemic-era boom in electronics sales. This sluggishness will only add to the drag on house prices.

There are other sources of stress, too. Household debt reached 206% of disposable income in 2021, well above even the 148% in mortgage-loving Britain. Some 60% of South Korean housing loans are ▸▸

In debt, in danger

Household debt as % of net disposable income

2021



Source: OECD

floating-rate, in contrast with America, where most lending is on fixed terms. As a result, household finances are squeezed more quickly when rates rise. The danger is that buyers like Mr Kim turn into forced sellers—something he says he will try to avoid at all costs—meaning a slide in house prices becomes a collapse.

This risk is enhanced by the country's bizarre rental system, known as *jeonse*. Many tenants pay huge lump sums to landlords, often 60-80% of the value of a property, which are returned after two years. In the interim the landlord can invest the cash as they wish. The system is a relic of South Korea's rapid industrialisation, when mortgages were harder to attain.

In a downturn, some landlords are forced to make firesales to reimburse departing tenants, having invested in risky assets, including more housing, and lost the money. Stories about sudden defaults and vanishing "villa kings", owners of dozens of rental properties, proliferate.

South Korea also demonstrates how high household debt and asset prices can constrain monetary policy. Opinion is split about whether housing-market frailty, and the hit to household incomes, will stop the BOK raising rates further. Oxford Economics, a research firm, thinks the BOK will keep going. Nomura, a bank, expects it to reverse course in May, and cut the benchmark rate to 2% by the end of the year.

Most countries are not as exposed as South Korea. But some, including Australia, Canada, the Netherlands, Norway and Sweden, share the same mix of high household debt and frothy property prices. All began raising rates after South Korea, and have further to go before the pressure feeds through. They are in for a rocky ride. ■

Buttonwood When to fight the Fed

There is sometimes reason to ignore a canonical piece of Wall Street advice

If you are one of the many buyers of American stocks or Treasury bonds in the past four months, or indeed a buyer of most financial assets over the period, then this column has a message for you: congratulations. Not only have you achieved pretty healthy returns—the S&P 500 index of big American firms is up by 15%—but you have done so while violating one of Wall Street's cardinal rules.

The phrase "don't fight the Fed" is associated with Martin Zweig, an American investor renowned for predicting a crash in 1987. Zweig's logic was simple. Falling interest rates are good for stockmarkets; rising ones are not. But the phrase's scope has expanded over time. Zweig's dictum is now used to suggest that betting against the institutions which print money and employ thousands of economists is always unwise.

Most of the time, it is. Over the past four months, however, the Federal Reserve has raised rates three times and markets have surged. On February 7th, a few days after the publication of blowout labour-market data, Jerome Powell, the Fed's chairman, warned that the fight against inflation would last longer than investors were anticipating. His warning had little effect. Investors elsewhere are also shrugging off central bankers' words. The Bank of Japan (BOJ) had long promised to stand by its "yield-curve-control" policies, but traders betting that it would relax them triumphed in December, when officials unexpectedly raised their cap on the yield of ten-year government bonds from 0.25% to 0.5%.

There is good reason to pick a scrap with a central bank now and again. Assessing the record since 1954, analysts at Truist Advisory Services, a wealth-management firm, find the S&P 500 has in fact performed fine, even well, on numerous occasions when the Fed has raised rates. Indeed, on average the index rises by 9% on an annualised basis between the bank's first and last interest-rate rise.

Traders defer to the Fed's analysis in large part because they presume it is based on superior information. An influential piece of research, published in 2000 by Christina and David Romer, two economists, seemed to confirm that the central bank's forecasts are more accurate than those of its commercial rivals. But subsequent studies have produced different results. One, published in 2021 by researchers at the Barcelona Graduate School of Economics and the Federal Reserve Bank of San Francisco, suggests that the superiority of the Fed's forecasting has waned since the mid-2000s. Meanwhile, forecasts from other central banks have been bad enough to inspire gentle mockery. Every year since 2011 the Swedish Riksbank has forecast a climb in rates, only to cut them. The resulting pattern, which shows forecasts rising upwards over and over, like spikes, has been compared to a hedgehog.

Moreover, a little central-bank fighting can be good for the broader financial system. Unless a central bank wants to control market interest rates directly, by buying enormous amounts of assets, policymakers must sometimes conduct what are known as open-mouth operations. What central bankers think about economic conditions and how they might affect rates are expressed in speeches and written guidance, which suggest optimism or pessimism on subjects from the economy's long-term-growth potential to financial stability. Done well, this sort of communication can remove the need for rate changes.

To refine their guidance, though, central bankers need people to take positions in financial markets, which they can react against. After all, as another Wall Street credo notes: disagreement is what makes a market. Buyers need sellers, and the information about what investors expect in aggregate is revealed through market prices. The process of back-and-forth between officials and markets is preferable to the corner into which the BOJ has been pushed, where vast purchases must be used to defend the bank's credibility.

Traders are still regularly turned into mincemeat when they take on central banks. Betting against the Fed is one thing when policymakers say they will be led by the data, as they do now, and quite another when they come out all guns blazing. Betting on a sudden rise in Japanese bond yields worked well for several adventurous funds in December, but the trade is known as "the widow-maker" for a reason. In moderation, however, some tension between markets and central banks is valuable, for investors and officials alike. Even financial rules are made to be broken.

Property (2)

The future of family living

NEW YORK

Soon city centres will include more homes and fewer offices

Lower Manhattan's skyline has long symbolised the fortunes of corporate America. A skyscraper boom in the roaring 1920s heralded the rise of the modern office, crammed with swivel chairs and desks. As corporate giants emerged and Wall Street firms flourished, office-space requirements exploded in the 1970s, fuelling a wave of new tower blocks such as the World Trade Centre. Now, as hybrid work slashes demand for physical workplaces, a different type of boom—driven by luxury flats, not offices—is gathering steam.

At 25 Water Street, in New York's financial district, America's biggest ever office-to-residential conversion is under way. The building, located near the New York Stock Exchange, will transform an office skyscraper, covering 1.1m square feet (102,193 square metres), into 1,300 apartments ranging from studios to four-bedroom homes. The revamped building will include a basketball court, a spa, and indoor and outdoor pools. It will also feature a rooftop terrace, an entertaining lounge and co-working spaces.

The building is part of a broader trend—one prompted by a glut of newly empty office buildings. The amount of space required for white-collar workers was already in decline before the covid-19 pandemic, but the vast increase in working-from-home has left even more buildings vacant. In the third quarter of 2022, office vacancies in America soared past 17%, the highest in nearly three decades, according to CBRE, a property firm. Some 8.4% of offices in London sit unoccupied, well above the long-term average of around 5%.

CBRE estimates that nearly 20m square feet of office conversions will hit America's property market this year; a small fraction of total supply, but nearly five times as much as in 2016, when the firm started to collect figures. In the intervening years, a third of all office conversions have been into homes (other favourites include hotels and, increasingly, life-science labs). Although much of the recent development has taken place in America's big east-coast cities, offices are becoming homes across the rich world.

Spanners in the works

Yet the pace of conversions would be higher were it not for a range of challenges. Some are practical. Flats require natural light and windows in each room—the large floor plans of modern office blocks often leave them stuck with poorly lit and badly ventilated spaces. Bathrooms in office buildings tend to be clustered in just one area, making plumbing a nightmare. Other challenges are related to red tape. Zoning laws restrict housing in many office districts. In some cases, height and density rules or affordable-housing requirements raise costs. Moody's Analytics, a consultancy, reckons that less than 3% of the 1,100 office buildings it tracks in New York meet the various criteria.

Meanwhile, developers planning to convert offices must buy out or relocate existing tenants. As such, the financial case for conversions is often unsatisfactory. Only office buildings that trade at a steep discount are likely to make profitable transformations. In some cases, converting an old office tower can cost more than building a brand new block of flats.

Some policymakers are trying to make the process smoother. With office vacancies threatening landlords' bottom-lines, commercial-property-tax revenues, and the businesses of nearby shops and restaurants, cities are relaxing zoning rules and experimenting with tax breaks. Eric Adams, New York's mayor, has predicted such incentives will lead to 20,000 new apartments in his city by 2033. London plans to use space in its Square Mile to create 1,500 new homes by 2030. Calgary, where one in three offices sits vacant, is home to one of the more ambitious plans. In 2021 the Canadian city launched a funding scheme for developers willing to try their hand at conversions. Officials have since pledged more than C$153m ($115m) in grants.

For now, conversions are a growing but relatively niche pursuit. Yet plummeting property values, increasingly empty office cubicles and growing political support suggest things will accelerate. Moody's Analytics expects office-vacancy rates in America to peak at about 19% in 2023 and to stay high for at least five years. Even with a healthy economy, demand for office space looks unlikely to return to pre-pandemic levels. Gallup, a research firm, estimates that Americans with jobs that can be done remotely will spend 37% fewer days in the office than they did before covid struck.

The future may, in fact, look something rather like lower Manhattan. Although 25 Water Street is new, office conversions in this part of town are an older phenomenon. After the stockmarket crash of 1987, which left nearly one in three offices in New York vacant, tax incentives were used to entice developers to convert ageing office buildings into homes. The September 11th attacks sped up the process, as businesses moved to other parts of town. Today around 83,000 people live in Lower Manhattan, up from fewer than 700 in 1970.

The result is a family-friendly enclave, and a neighbourhood which offers a blueprint for struggling office hubs elsewhere. Children on swings in playgrounds and residents walking their dogs have altered the fabric of the former nine-to-five financial centre. A nearby boathouse provides free kayak trips on the Hudson river during the summer. In the colder months, ice skaters whizz around an outdoor rink in Brookfield Place, a shopping mall near the waterfront. Even as financial firms have relocated, a more creative collection of tenants, including Condé Nast and GroupM, two media giants, have moved in. The death of office blocks does not have to mean the death of city centres. ■

Danger ahead

The $2.5trn question...

WASHINGTON, DC

...upon which the future of monetary policy rests

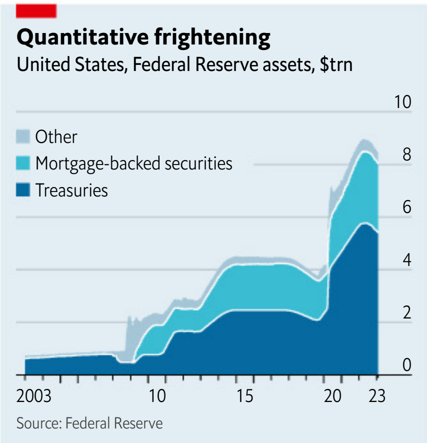
Can a central bank make $2.5trn of cash vanish without anyone much noticing? That is the improbable, even audacious, mission the Federal Reserve has begun, trying to shrink its vast balance-sheet while minimising disturbances to the economy. The process—known as "quantitative tightening" (QT)—got under way in mid-2022. The Fed has already shed nearly $500bn in assets, a good first step. But recent ripples in the banking system hint at turbulence ahead. Some analysts and investors think these strains will ultimately force the Fed to call off QT well ahead of schedule. Others suspect that the central bank still has time, and tools, on its side.

It may sound like a technical and arcane debate. It is most certainly complex. But it also gets to the heart of modern monetary policy. The Fed, like other central banks, has come to rely on quantitative easing (QE)—purchasing assets, especially government bonds, on a giant scale—to calm financial markets and boost the economy during severe downturns. For QE to work in the future, QT must work now: expanding balance-sheets in bad times is only sustainable if they shrink in good times, otherwise they will ratchet ever higher.

Since the global financial crisis of 2007-9 the Fed has resorted to QE on four occasions, yielding a body of research about how it works. In contrast, the Fed has employed QT just once, from late 2017 to 2019, stopping early after the money market started to buckle. There is thus a lot of uncertainty about its consequences.

One superficially appealing way to think about QT is as QE in reverse. Just as QE involves creating central-bank reserves to buy bonds, so QT involves removing reserves as the central bank pares back its holdings. And just as QE helps to hold down long-term rates, so QT raises them. Researchers estimate that shrinking the Fed's balance-sheet by about $2.5trn over a few years has roughly the same impact as raising rates by half a percentage point.

Many think this has already happened, with the market lifting long-term rates when the Fed laid out its QT plans last year. Christopher Waller, a Fed governor, has argued that since investors have priced in the announced reductions, the Fed is now simply fulfilling expectations: "The balance-sheet is just kind of running in the background." Fed officials have said QT should be about as exciting as watching paint dry.



Quantitative frightening

United States, Federal Reserve assets, $trn

Source: Federal Reserve

The trouble with the analogy is that whereas paint gets drier and drier, QT gets more and more treacherous. This is also a crucial way in which it differs from QE. When the economy is in good shape, central banks can gradually step away from QE. In the case of QT, the danger is that it takes market turmoil for the Fed to realise it has gone too far, as in 2019. Initially QT drains money from a commercial-banking system that is awash in liquidity; as it continues, however, liquidity gets steadily tighter, and funding costs for banks may soar without much warning.

A preview of the possible stresses has played out in the past few weeks. Some banks, having recently lost deposits, have turned to the federal-funds market to borrow reserves from other lenders in order to meet regulatory requirements. Daily borrowing in the fed-funds market in January averaged $106bn, the most in data going back to 2016. So far the squeeze has been confined to smaller banks, a hopeful sign that the financial system is returning to its pre-pandemic state, in which big banks lend to their punier peers. Nevertheless, it raises the question of whether and when other banks will hit funding shortages.

The idea that a crunch is far away is supported by a look at the Fed's liabilities. About $3trn are banks' reserves (in effect deposits at the central bank). Another $2trn is money from firms which enter into exchanges with the Fed for Treasury securities (such overnight reverse-repurchase agreements, or reverse-repos, allow them to get a small return on their excess cash). Mr Waller has said that QT ought to run smoothly until bank reserves hit about 10% of GDP, when the Fed will slow its balance-sheet reductions to try to find the right size for the financial system. If reserves and reverse repos are interchangeable, as Mr Waller suggests, then reserves now amount to 19% of GDP, leaving plenty of room. Thus QT could roll on for another couple of years, taking a big bite out of the Fed's balance-sheet in the process.

But problems may arise well before then. First, banks probably need more reserves than they did before covid-19 because their assets have expanded faster than the rest of the economy. Second, and crucially, reverse repos and reserves may in fact not be interchangeable. Much of the demand for reverse repos comes from money-market funds, which function as an alternative to bank deposits for firms seeking slightly higher returns. If that demand persists, the weight of QT will instead fall more heavily on bank reserves. In this scenario, reserves may run short before the end of this year, think strategists at T. Rowe Price, an investment firm. The Fed's balance-sheet would be stuck at around $8trn, almost double its pre-pandemic level. This would fuel concerns about its ability to embark on QE in future.

Oddly, the debt-ceiling mess may conceal any ructions for the next few months. With the Treasury unable to borrow until Congress raises the debt limit, it is running down its cash holdings at the Fed. As money leaves the Treasury's account, much ends up in the banking system, which in turn helps banks to replenish reserves.

But when Congress does get around to raising America's debt ceiling, the Treasury will need to ramp up its borrowing. For banks this may mean a rapid loss of reserves. The Fed has created a lending facility to relieve such squeezes. There is, though, no telling how it will perform in the wild, adding yet more uncertainty to the course of QT. The market may be placid for now. It is unlikely to stay that way. ■

Free exchange | Activision activism

It is not just big tech that should be worried about overmighty trustbusters

There are mergers to worry about and mergers to welcome. In the first category are tie-ups between biggish firms in the same line of business. In these "horizontal" mergers, a competitor is taken out of the market, removing a constraint on prices. In such cases, competition authorities will investigate the merger and may block it. Other mergers have historically been considered less troublesome. If a firm buys another in an adjacent line of business (a conglomerate merger) or if a supplier buys a customer (a vertical merger), the effects on competition have been seen as benign.

But that has changed in recent years. More and more non-horizontal mergers are being challenged by antitrust authorities. In September America's Federal Trade Commission (FTC) lost its challenge in court to a tie-up between Illumina, which provides "next-generation" DNA-sequencing tools, and Grail, a developer of early cancer-detection tests, which rely on Illumina's technology. The FTC is appealing the judgment. In October Britain's Competition and Markets Authority (CMA) forced Facebook to undo its purchase of Giphy, a supplier of GIFs to social-media platforms. On February 8th, the CMA issued an initial finding that the acquisition by Microsoft, maker of the Xbox games console, of Activision Blizzard, a game studio, would reduce competition in the industry.

Vigorous antitrust policy is often motivated by anxiety about big tech. Facebook, Google and Microsoft became swiftly dominant in their markets because of the power of networks: the more people used their products, the better they became and the more attractive they were to other customers. Although it is difficult to find fault with such organic growth on competition grounds, there is a conviction in trustbuster circles that big tech should not have been allowed to buy other businesses along the way. The recent regulatory activism is therefore fuelled by regret about the past. Yet it carries its own risks. In many circumstances mergers are, in fact, a boon to consumers. The danger now is that the pendulum will swing towards over-enforcement.

To understand how regulators got to this point, it is worth returning to the 1970s. A group of antitrust thinkers orbiting the University of Chicago cast doubt on the idea that vertical mergers could be harmful by employing the theory of "one monopoly profit". This theory says that a monopolist cannot extend its market power up or down the vertical chain of production. To grasp it, imagine an airport operator that leases space to two coffee shops. The operator owns a monopoly resource: the property around a captive market of passengers who require their morning caffeine. To maximise profits, it will set the rents high enough to allow the shops no more than a competitive return. Yet were the operator to buy one of the coffee retailers, the profit-maximising rent would not change (hence one monopoly profit).

Looked at this way, vertical mergers cannot harm consumers. They may even help them. A related theory posits that a vertical merger in an industry where there is some market power at each stage of production will lead to lower prices, because one of the non-competitive markups will be eliminated. In such circumstances, one monopoly profit means you don't get gouged twice.

Trustbusters these days are less focused on pricing. They are more concerned that a vertically integrated firm will use its muscle in one part of the chain to freeze out rivals in another part. In the Illumina case, the concern is that rivals of Grail will be denied the DNA-sequencing tools they need to develop competing cancer tests. In the Microsoft case, the fear is that Sony, maker of PlayStation, the rival console to Xbox, will be denied games made by Activision, to the detriment of competition. To make the charge stick, trustbusters must demonstrate that such restrictions would be profitable, which they are unlikely to be in the short term, since they mean at least initially selling fewer products. Regulators thus have to make predictions about how a market might evolve. This is the economic equivalent of long-range weather forecasting.

Which brings the story back to big tech. The winner-takes-all aspect of networks tends to eliminate competitors to the big tech giants. There is not much competition policy can do about such dominance. In theory, countless startups are vying to knock big tech firms from their perch, which ought to act as check on their business conduct. But so-called "shoot-out" acquisitions—purchases of startups that might become a rival to big tech firms—tend to neuter any threat from this corner. For many trustbusters, Facebook's acquisition in 2012 of a fledgling Instagram was in this category. There are also regrets that Google's acquisition in 2008 of DoubleClick, an ad server, helped to strengthen its hold on digital advertising, a market now the subject of a big antitrust probe.

In praise of big business

Doubtless there were times when more vigilance was warranted. But it is easy to forget that the Chicago revolution was a response to overmighty trustbusters, who believed big was always bad and small businesses, however awful, should be shielded from competition. In America the courts are a check on over-enforcement. There are decades of jurisprudence, shaped by the Chicago School, which says non-horizontal mergers are benign. Nevertheless, the prospect of a court battle is enough to put off some firms. Last year Nvidia, a chipmaker, abandoned its proposed merger with ARM, a chip designer, in the face of antitrust scrutiny.

It is telling that the CMA has taken the lead in blocking mergers involving tech giants, such as Facebook and Microsoft. Britain's trustbusters may now be among the most feared. Freed from the EU's competition policy, the CMA revamped its guidelines in 2020 to give more weight to how post-merger markets might evolve. In Britain and Europe competition cases are pursued in an administrative system, not in a court, as in America. All of which gives the CMA considerable powers. A rare example of a Brexit dividend? Trustbusters might say so. Not everyone would agree. ■

Meteorology

The heat is on

As bad weather becomes more common and more extreme, modellers seek to understand the limits of the possible

The heatwave that struck parts of North America's Pacific coast in 2021 propelled temperatures in Lytton, a village in British Columbia, to 49.6°C—4.6° higher than the previous record. On the fourth day of this torment the place erupted in flames and was almost completely destroyed (see picture above). These events were so out of the ordinary that, in a press conference held some weeks later by climate modellers, they struggled to explain how circumstances had conjured them.

Climatologists reckon the North American heatwave of 2021 was one of the most extreme deviations from meteorological norms ever recorded, anywhere. But others have come close. As the world gets hotter, phenomena once considered rare are becoming common and others, believed impossible, are happening.

This shift in weather patterns has inspired modellers to pay more attention to the tails of the frequency distributions of meteorological possibility which their models generate (see chart on next page), in search of such unprecedented extremes. One recent exercise, led by Erich Fischer at ETH Zurich, a technology university in Switzerland, and presented at last year's annual jamboree of the European Geosciences Union, shows how the heatwave that destroyed Lytton could have been foreseen with data available at the time.

Cite UNSEEN

The approach Dr Fischer used, ensemble-boosting, is one of several developed recently. Another, from Britain's Met Office, is UNSEEN (Unprecedented Simulation of Extremes with Ensembles). This was first put to work by Vikki Thompson and her colleagues at the Met Office in a retrospective analysis of floods that had drowned parts of the country in 2014, resulting in £451m ($743m) of insurance claims.

More than 130 years of English records had offered no indication such a biblical deluge was possible. Yet, here it was. As Thierry Corti, a climate-risk analyst at Swiss Re, a reinsurance company, observes, "the risk landscape is evolving. So if you simulate probabilities of a rare event you need to take that against the backdrop of something that's changing. That makes it much more complex." To try to understand what had happened, Dr Thompson's team simulated British winters between 1981 and 2015 many thousands of times, and looked at the spread of possible outcomes, including rare events.

Also in this section

67 An internet in the sky

Into this methodical repetition they added a sprinkle of chaos—the famous flap of a butterfly's wing, or, more realistically, the revving up of a factory's engines to add a small and local amount of heat to the atmosphere. By repeatedly simulating the present climate, perturbed each time in minute ways, the Met Office modellers generated a range of virtual winters which included extremes that are possible but have not yet manifested themselves.

In the case of floods, the group found a 34% chance each winter that rainfall records would be broken in at least one of four broad regions of Britain. They concluded that decision-makers would do well to prepare for new record-breaking inundations "in the next few years". They were vindicated when their warnings came to pass in the early months of 2020.

The UNSEEN approach is inspiring others. For example, various groups are now looking at "near-miss" events, in which an extreme drought or flood befalls a region with low population density, thus affecting few people. With UNSEEN and

UNSEEN-like methods, it is possible to assess the risk of a similar event striking a neighbouring but more populous area—and with what consequences.

Others have taken an interest in bits of the future when an extreme weather event would be particularly damaging. The Paris Olympics, to be held next year, will take place during that city's hottest weeks. A group of meteorologists from various French research institutes therefore wondered just how bad a heatwave manifesting itself then might be. Using yet another approach, they found a chance of temperatures being more than 4°C higher than they were during a catastrophic heatwave in 2003, in which tens of thousands died.

Since that happened, France has built a "heat plan" which includes an early-warning system and provisions for opening cool spaces if needed. Whether this will be enough to ameliorate the effects of a record-breaker coinciding with the arrival of thousands of athletes and hundreds of thousands of visitors remains to be seen.

That something could happen does not mean it will, but in some cases, such as the Paris Olympics, either the risk or the consequences are clearly high enough to warrant close attention. Another example is a study published in 2019, by Dr Thompson and her colleagues, which found that, in south-east China, each summer holds a 10% chance of there being a record-breaking hot month. The temperatures warned of were within the range of the records set during last year's deadly heatwave.

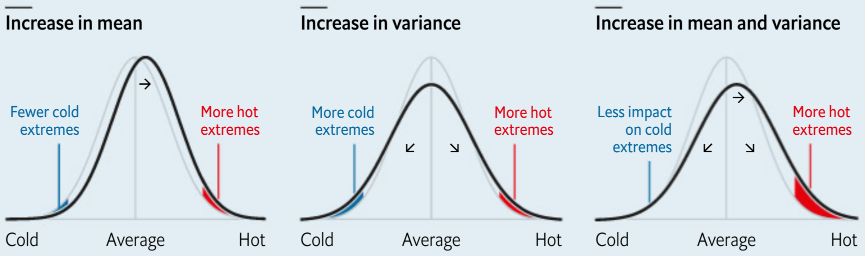
Other research has asked if a region is "overdue" for an extreme event because of the changing climate, or whether its infrastructure or economy is particularly ill-prepared for what could happen. In the case of Kansas, America's breadbasket, both look true. The state produces 17% of the country's wheat, and is said to foster ideal conditions for growing this crop. But what pertained before 1900, when wheat farmers were moving in, may not hold now. In today's climate, heatwaves that were once once-a-century events are likely to occur once a decade, according to a study to be published soon by Erin Coughlan de Perez of Tufts University.

Model behaviour

Dr de Perez also found that hot weather sufficient to damage wheat's growth by inhibiting its enzymes is likely to occur in the same years as periods of low rainfall. But the irregular pace of weather change may lull farmers into a false sense of security, for she and her colleagues discovered, too, that recent years have been cooler than expected. "Several regions might have 'gotten lucky' in terms of their recent experience of extreme events," they write. The same study predicts similar, if less pronounced, patterns in Henan, a wheat-producing province of central China.

Spread betting

Effect of changes in global temperature on weather events



Source: IPCC AR5

Information about low-likelihood but high-impact events is also of interest to insurers (who carry out their own modelling as well) and can help, too, in the design of climate-resilient infrastructure. In the Netherlands, for example, Climate Adaptation Services (CAS), a charity, gathers data on possible consequences of climate change between now and 2050, including detailed maps that the authorities can draw on to test their plans.

Timo Kelder, an UNSEEN modeller at CAS, says they are thinking about how they might add new stress tests which assess how successful plans would be in the face of the brutal and unprecedented events these studies suggest are plausible. Meanwhile, in Britain's Met Office, researchers are now looking at another sort of extreme event—the risk of "wind droughts" which would wipe out a lot of the country's wind-turbine-base electricity supply. It would be ironic indeed if Britain's huge effort to combat climate change in this way were, itself, to fall victim to a changing climate. ■

An internet in orbit

Dynamite and a laser beam

How to secure military communications in space

SATELLITES ARE crucial military infrastructure for spying and communications. They are also vulnerable to attack and disruption. In November 2021, three months before it invaded Ukraine, Russia fired a missile into a defunct satellite. Then, in October, a Russian diplomat declared even commercial satellites could be legitimate targets. Satellite systems used by Ukraine have been hacked and jammed. Ground antennae have been attacked.

In light of this sort of thing, America's military establishment is worried that its satellite network is not up to snuff. But it has a plan. The Space-Based Adaptive Communications Node (Space-BACN, or "Space Bacon", to its friends) will, if successful, create a laser-enabled military internet in orbit around Earth by piggybacking on a number of satellites that would have been launched anyway.

Space Bacon is a brainchild of DARPA, the special-projects research arm of the Department of Defence, and is an intriguing orbiting echo of the original, terrestrial ARPANET, which evolved into the internet. (It was so named at a point in DARPA's history when the organisation lacked the initial "D" for "defence".) The plan is to fit as many newly launched satellites as possibly with laser transceivers that will be able to communicate with counterparts as far away as 5,000km. Satellite owners will pay for these transceivers, but will then receive payments from the American government for their use.

Zipping the light fantastic

Space Bacon promises many benefits. Unlike radio, the normal mode of communication with and between satellites, transmissions by laser beam are hard to intercept and almost impossible to jam. Indeed, adversaries might not even know when a transmission is taking place, a bonus for operational secrecy.

Lasers also offer far higher data rates than radio waves. Some satellite constellations do already use lasers for communication between members, and these achieve about two gigabits per second (about 200 times what radio can manage). DARPA, however, has asked Space Bacon's contractors to develop equipment that can transmit, in a single beam, 100 gigabits per second. That is enough for several high-definition movies to be sent in that time.

The ability to hand military information from bird to bird like this—and without the constraints imposed by differences in the communication protocols of the satellites providing the piggyback—will greatly simplify matters. Individual satellites can download data only when in range of a terrestrial antenna belonging to their particular network, or via another member of that network, which is likely to be in a similar orbit. A satellite in the Space Bacon system, by contrast, can hand off data to another, possibly belonging to another operator, in a different orbit. And that satellite may, in turn, hand it to yet another, until a suitable ground antenna is within reach.

At the moment, reporting delays caused by lack of network interoperability mean, say, that a tank spotted by a satellite may have driven off by the time its location has been received by anyone who could make use of the information. Space Bacon will more or less eliminate this latency.

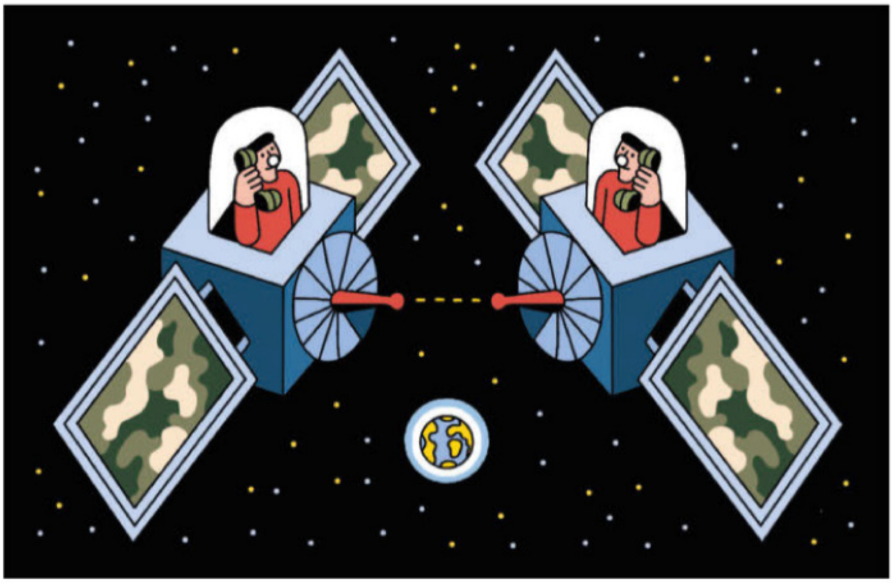
It will also offer one of the vaunted pluses of the original ARPANET design, which the internet inherited. This is automatic rerouting of a message if a node (ie, a particular satellite or ground station) is disabled. Also, by bringing pretty-well every relevant ground station into play, data that are especially sensitive can, as Greg Kuperman, Space Bacon's programme manager, observes, be routed through antennae in places where attempts to eavesdrop on the final, radio-transmitted, leg of the journey are considered less likely.

The heart of all this is the precision of aim that will be built into Space Bacon's lasers. Phil Root, head of DARPA's Strategic Technology Office, says pondering this "blows my mind". Satellites in low Earth orbits (LEOs, those below an altitude of 2,000km, and the sort which Space Bacon will use to start with) travel at about 7.8km a second, often tumbling as they go. Connecting the optical heads on two of these will be an epic task. Advances have, however, been impressive. Mynaric, a firm based near Munich that is designing heads for Space Bacon, can adjust a laser's trajectory by just 57.2 millionths of a degree. At a distance of 1,000km, this translates into a beam displacement of less than a metre.

To sweep its lasers smoothly Mynaric uses a system of motor-driven lenses and tilting mirrors. Another contractor, mBryonics of Galway, Ireland, employs electronic signals to alter the light's phase—minutely adjusting the beam's direction in a manner analogous to the redirection of photons through a glass lens.

Even with these levels of precision however, initial direct hits on a distant head will probably be rare, says David Mackey, mBryonics' top technologist. Optical heads attempting to link up will therefore conduct what he calls blind spiral search patterns. When a beam finds its mark, the signal will inform the receiver of the sender's exact position. Using a different wavelength, to prevent interference, the receiver will then fire a laser back along the same path to confirm the connection. Mr Mackey thinks his kit will complete these orbital "handshakes" in ten seconds.

Existing laser-based satellite communications rely on sensors called photodiodes. Space Bacon's higher data rates need a different approach. The message-carrying photons will enter a single fibre-optic strand with an opening a mere ten microns across—far smaller than the 100 microns of a photodiode, of which more than one may, in any case, be needed. Mybryonics hopes to pull off this trick using a mirror with a complex curved surface to redirect photons into a device the size of an iPhone that focuses the light and shoots it into the fibre-optic strand.



The Space Bacon system's specification requires that it draw no more than 100W from its host satellite. This limit poses a problem for the processor needed to translate between the different data protocols used on satellites, for only 40W of that 100 is available to do so.

One firm working on this is Intel, an American chipmaker. It is designing what Sergey Shumarayev, the project's leader, describes as a "Rosetta Stone-type modem". Mr Shumarayev says commercially available components have been ruled out for doing this because they are too big and power-hungry. He reckons that if they were used, the result would be as large as a pizza and consume 400W. His team are "trying to shrink the pizza size into a matchbox" using what they call "chiplets", in lieu of bigger semiconductors.

Bringing home the BACN

DARPA wants Space Bacon to cost a maximum of $100,000 a satellite, the better to encourage participation. It bodes well that Amazon, SpaceX and Viasat, a lesser-known but well-established satellite-communications company, are all designing command-and-control architectures for Space Bacon.

Amazon plans to launch a broadband LEO satellite constellation called Project Kuiper. This may incorporate Space Bacon transceivers. SpaceX may add them as it expands Starlink, its broadband LEO constellation, from its current complement of 3,500 or so satellites to tens of thousands. Viasat's existing network is different. It is based on five big satellites in geosynchronous orbits 36,000km above Earth, which will be joined by another three over the next 14 months. The firm also has an extensive network of ground stations to bring to the party.

One command-and-control problem is working out optimal routes for the handing on of data. Craig Miller, head of government systems at Viasat, says this is trickier than solving the travelling-salesman problem, a maths classic. As the network grows, computing the most efficient routes gets harder and harder—and not just because the nodes will be moving. Mr Miller's team must also assign and take into computational account "variable trust" scores for potential data hops, for some are more vulnerable than others to enemy action.

DARPA plans to select the best subsystems this summer, and hopes to have a prototype ready for testing in LEO before 2025. If all goes well, the network could then be extended to geosynchronous orbits. Allies, Dr Root reckons, might be invited to join. America's adversaries will no doubt be watching closely. ■

Christian streaming

Man of the people

A television show about the life of Jesus has become an unlikely hit

One sunny afternoon last summer, Jesus walked onto a field near Dallas, Texas, and with just a few loaves of bread and a couple of fish, fed a crowd of 5,000. In truth, the miraculous meal had been rustled up by television producers: the pita bread came from local grocery stores and the croaker, a silvery fish abundant in the Atlantic Ocean, was supplied by Asian-American supermarkets. But none of these earthly details mattered once the cameras started rolling and Jesus, played by Jonathan Roumie, lifted his eyes to heaven and blessed the meal.

The miracle of the loaves and fishes, first recorded in the Gospels, is dramatised in "The Chosen", a TV show about Jesus Christ and his followers. It is produced by a fledgling studio. The director had not previously been blessed with success. The actors were unknown. Yet it has become a hit, and recently released its third season.

The show's success is revealing. It attests to the popularity and profitability of Christian entertainment. It also highlights how film-makers of faith can circumvent Hollywood's godless gatekeepers.

Neal Harmon, head of Angel Studios, the producer and distributor of the show, says almost 11m people have watched it on their free apps; many more have seen it on streaming platforms including Amazon Prime, Netflix and YouTube, where certain seasons of "The Chosen" are available. Angel Studios released the first two episodes of the new season in American cinemas in November. The double-bill made nearly $9m in its opening weekend and ranked third in the box-office charts, ahead of "Black Adam", a superhero movie, and "Ticket to Paradise", a rom-com starring George Clooney and Julia Roberts.

Most depictions of the life of Jesus dwell on his divinity, but "The Chosen" focuses on his ordinariness. "We have put Jesus on stained-glass windows," says Dallas Jenkins, the show's creator and director, yet "what makes the story of the Gospels so powerful is, in fact, his humanity." Viewers watch Jesus cooking, playing with children or brushing his teeth. He cracks jokes, too. Asked at a wedding if he can help one of his acolytes improve his dance moves, he quips: "Some things even I cannot do."

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The disciples, meanwhile, lead unhappy lives. When they meet Jesus for the first time, they are seeking deliverance from worldly woes, not salvation after death. Simon is a debt-ridden gambler with a dodgy marriage. Mary Magdalene's struggle with otherworldly demons has driven her to alcoholism and thoughts of suicide. Matthew, a taxman, is caught between the Roman authorities and his countrymen.

Mr Jenkins uses creative licence when weaving characters' stories together. Matthew, for example, is responsible for making Simon pay his debts. Thomas, another disciple, runs a wine business which Jesus saves from ruin thanks to his ability to transmogrify water. Nicodemus, a Pharisee, meets Jesus through Mary Magdalene, on whom he had tried to perform an exorcism. None of this material can be found in the Gospels, but Mr Jenkins and the show's writers have consulted with three Bible teachers—a Catholic priest, an evangelical professor and a Messianic Jew—to determine whether their plots are plausible.

Faith is not a prerequisite for enjoying ▸▸

"The Chosen", Mr Jenkins argues: non-Christian viewers "can appreciate these stories in the same way that, if you don't believe in the Force, you can still appreciate 'Star Wars'." Some may find his approach too playful, or insufficiently faithful to scripture. Indeed, some evangelicals have taken to YouTube to decry scenes in which Jesus rehearses his sermons or makes light of his divinity. Mr Jenkins, himself a devout evangelical Christian, maintains that the show is reverent of the man from Nazareth. Jesus's humanity "doesn't detract from his divinity. In many ways, it makes it even more awe-inspiring," he says. "The creator of the universe actually lived among us."

The film-maker believes in miracles, and some might see a minor one in the way he made the show. After Mr Jenkins's first major theatrical project, "The Resurrection of Gavin Stone" (2017), flopped at the box office, he was not sure if he "had a future in the business any more". "The Chosen" revived his career and Mr Roumie's. The actor was on the verge of quitting the industry. Now, when millions of Christians think of Jesus, they may picture his face.

"The Chosen" also saved Angel Studios' predecessor, VidAngel. Before the show took off, the company was facing bankruptcy when several Hollywood studios sued it for copyright violations. (VidAngel allowed users to filter out disagreeable scenes of nudity or violence from films and TV shows; it reached a settlement with the studios in 2020.)

Film and television executives, a secular bunch, have long shunned religious projects. But there are ways to bring pious plots to the screen without their say-so. Studios did not see much commercial potential in "The Passion of the Christ", a blood-spattered biblical drama of 2004, and Mel Gibson, the director, ended up footing the bill himself. (The film went on to gross more than $600m worldwide.) In contrast, the producers of "The Chosen" have persuaded fans of devotional drama to chip in. To make the first season, they collected $10m via crowd-funding—at the time setting a record for a media project. In the main the show is still financed in this way; its website indicates how many episodes have been bankrolled.

The fundraising model creates a bond with fans and they get rewards for digging into their pockets, such as the opportunity to appear on the show. More than 9,000 flocked to Texas to be extras in the scene where Jesus feeds the crowd. Mr Jenkins regularly posts updates and behind-the-scenes looks for fans.

Nearly four years after the show had its premiere, the success of "The Chosen" baffles Mr Jenkins. It doesn't "make much sense," he says. Then again, "neither does the story of the feeding of the 5,000." ■

The Holocaust

It took a continent

A new history focuses on European collaborators in the Nazi horrors

The Holocaust: An Unfinished History. By Dan Stone. *Pelican Books; 464 pages; £22*

One day in June 1941, in the Lithuanian city of Kaunas, a local man—soon to be known as the "death-dealer"—picked up a crowbar and waited for his first victim. The city had just been captured by the Nazis and a German soldier recorded what happened next. Several dozen Jewish men were brought out one by one and beaten to death in turn. After each murder, the crowd, including women and children, clapped. They also sang the Lithuanian national anthem.

In his illuminating study of aspects of the Holocaust and its aftermath, Dan Stone recounts the slaughter in Kaunas to demonstrate the important role played by enthusiastic locals. The director of the Holocaust Research Institute at Royal Holloway, University of London, Professor Stone is the author of numerous works on the Nazi genocide. The four key themes of his new book are "trauma, collaboration, genocidal fantasy and post-war consequences". He writes with authority and an eye for the human story not always evident in Holocaust historiography. The first-hand testimonies he cites underscore the suffering of victims and survivors and the savagery of the perpetrators.

Like every historian of this period, he faces the question of whether to write a broad account covering as much as possible, or to focus on a single country or episode that embodies a particular theme. He chooses the panoramic approach and his narrative traverses wartime Europe: from the now-familiar names of death camps such as Auschwitz to lesser-known aspects of the Holocaust. These include the round-up of 532 Jews in Oslo by Norwegian policemen in November 1942, most of whom were gassed in Auschwitz, and the horrific fate of the Jews of Transnistria. Incarcerated in pigsties, many of them froze to death or went mad with hunger, eating twigs, leaves and human excrement.

The book's main strength is its comparison of different countries, their authorities and their willingness to collaborate with the Nazis or slaughter local Jews themselves. The chapter on the death marches, when inmates were moved between concentration camps, and the eventual liberation of those camps and its aftermath, is especially strong, perhaps because Professor Stone has already written a book on this specific area.

But the rapid switches between locations, events and individuals can sometimes make for choppy reading. Meanwhile, the publisher's grandiose claim that this book "upends much of what we think we know about the Holocaust" is inadvisable and overblown.

“The ubiquity of collaboration across Europe”, writes Professor Stone, “means we need to stop thinking of the Holocaust as solely a German project.” No serious historian does think that. Randolph Braham documented the responsibility of the Hungarian state and its officials for the extermination of rural Hungarian Jewry in “The Politics of Genocide”, first published in 1981. The German soldier’s account of the death-dealer of Kaunas was first published in 1958. “How the Holocaust Began”, an excellent recent documentary made by the BBC, includes footage of Latvian civilians chatting as they watch local Jews being shot into a trench.

Professor Stone usefully notes the “seemingly inverse relationship between ‘Holocaust consciousness’ and the rise of xenophobic nationalism that characterises our age”. In an initially promising chapter on Holocaust memory and how the genocide has been perceived and exploited, he mentions the Yugoslav wars of the 1990s, during which both Croatia and Serbia tried to use the Holocaust for political advantage. But then the author wanders off into a modish discussion of a Cameroonian scholar who was disinvited from a German festival because of his pro-Palestinian views, as well as the “shocking slide of America’s Republican Party into fascism”.

This is not the language of serious scholarship. Professor Stone considers anti-Israel boycotts, but makes no mention of Srebrenica, where, in 1995, 8,000 men and boys were killed by Bosnian Serb forces in a clear example of a modern-day genocide. The world did nothing. That massacre illustrates the cynical adage that, for all the books, memorials, museums and remembrance days, “Never again” may simply mean that never again will Germans kill European Jews. ■

Historical fantasy fiction

The magic word

Salman Rushdie’s new novel is an ode to storytelling and freedom

Victory City. By Salman Rushdie. *Random House; 352 pages; $30. Jonathan Cape; £22*

IN SALMAN RUSHDIE’S 15th novel, a magical storyteller survives a sadistic assault. In its aftermath she reflects that, although “terrible things happened”, nonetheless “life on earth was still bountiful, still plenteous, still good.”

Sir Salman had completed “Victory City” before he was stabbed by a jihadist on a stage in New York, losing an eye and full use of a hand. His book’s joy in fictions that “could be as powerful as histories” testifies to a lifetime of free-spirited invention. But its defiance and exuberance is poignant now that the author of “Midnight’s Children” and “The Satanic Verses” has narrowly avoided the fate decreed for him by an Iranian *fatwa* of 1989.

In Sir Salman’s stories, unfettered creativity rewrites the destinies laid down by dogma and law. “Victory City” is a fable about the power of narrative art, hitched to a historical chronicle. Pampa Kampana, the Indian storyteller-queen at its heart, believes that “the miraculous and the everyday are two halves of a single whole.” Over four decades, that kinship has given Sir Salman his authorial signature.

Pampa has been given a “cursed gift of longevity” and it grants her 247 years of life. She has other powers, too, and conjures the city and empire of Bisnaga into being by words alone. She directs its course over two centuries as queen consort, regent, minister and sorceress. In her realm of wonders, fairy-tale devices often drive the action, such as spells that turn humans into birds or talking forest animals.

Yet Sir Salman makes Bisnaga “a place with a history”, not just “the invention of a witch”. Its ascent, prosperity and decline track the real-world progress of the pluralistic Hindu empire of Vijayanagar (indeed Vijayanagar means “victory city”). That kingdom flourished from the 1330s until Islamic invaders left it ruined after the Battle of Talikota in 1565.

Pampa steers history, then records it in an epic poem. There was a princess-poet, Gangadevi, in the 14th century; some of Sir Salman’s characters, such as Krishnadevaraya, a capricious king, bear the names of actual rulers. The green-eyed, red-haired Portuguese adventurers with whom Pampa has affairs, and who carry news of the empire overseas, have real counterparts.

With its female progenitrix, Bisnaga becomes at its zenith a sort of feminist utopia. Its women are “neither veiled nor hidden” but honoured as warriors, “lawyers, traders, architects, poets, gurus, everything”. Pampa and her more enlightened allies also battle sectarians and fundamentalists, welcoming “unbelievers and other-believers” to share their “reign of love”. This may seem like wish-fulfilment, but Vijayanagar was noted for its tolerance and its influential women.

With history on one flank and fantasy on the other, Sir Salman gallops down the generations. Scenes of intrigue, exile, love and murder propel fast-flowing, wittily written chapters. Pampa learns, as writers must, that “once you had created your characters, you had to be bound by their choices.” Those choices are often unwise. “Golden ages never last long”: religious bigotry, palace plots and envious neighbours hasten Bisnaga’s downfall into “rubble, blood and ash”.

In the closing verses Pampa declares: “Words are the only victors.” Sir Salman may distrust all evangelists, but in this novel he shows his faith in the liberating power of art. ■

World in a dish

A perfect pairing

Thai food and British pubs make a delicious combination

FROM THE outside, the Lemon Tree is an unassuming pub. Sitting on a quiet road in central London, it looks like many of the city's Georgian boozers. On the ground floor there are dark wooden furnishings, framed etchings and a bar offering local ales, imported lagers and pork scratchings. The traditional setting suggests a menu of pub grub such as burgers. A visitor to Britain's capital may be surprised by the culinary delights served upstairs.

Squeeze past the gaggles of office workers and listen out for the sound of clanging woks and sizzling oil. Follow the enticing scent of frying aromatics and fish sauce, and you'll find a small Thai restaurant providing warming bowls of massaman curry and tall mounds of fried noodles. This is a cultural collaboration not unique to the Lemon Tree. Anglo-Thai grub was first dished out at the Churchill Arms in Kensington in 1991 and is now served in at least 30 taverns across London.

Often Thai cooks will rent a kitchen from a pub landlord in return for a stream of hungry customers. Ask a patron to explain why this arrangement seems to work, and you might notice his eyebrow flick upward, citing a hunch that the reason lies in some landlords' penchant for marrying Thai women. It is true that a study of Thai eateries in Britain found that more than 68% are run by women and that, according to the Home Office, wives received almost two-thirds of all settlement visas granted to Thais in the early 2000s. But the phenomenon of Thai kitchens in pubs is probably the result of commercial opportunities rather than romance.

At the beginning of the 21st century the Thai government launched a gastro-diplomacy campaign which aimed to increase the number of Thai restaurants around the world. (As well as celebrating the country's delicacies, officials wanted to tempt tourists to visit.) For budding restaurateurs in Britain, setting up shop in a pub was seen as less risky than starting from scratch. Landlords usually had dining space that was not being used effectively, which made it easy for entrepreneurial cooks to make a compelling business case.

Pubs may have poky kitchens, but that does not matter with this style of cooking. Many Thai dishes are based on street food and rely on a few versatile ingredients, including chillies, coconut milk, herbs, lime and tamarind. A flexible menu does not require a vast stockroom or counter space. It helps, too, that the flavoursome cuisine pairs superbly with beer and is quick to prepare. Dishes such as pad Thai, a particular British favourite, or seafood steeped in a glossy savoury sauce can be whipped up in a single wok in minutes.

Regardless of how it came to be, the popularity of Thai pub food reflects Londoners' open-mindedness as well as their desire for continuity. If you mess around with the formula of a quintessential pub too much, you risk unsettling regulars who take comfort in tradition. But that's not to say you cannot please them with the mouth-watering street food of Bangkok—so long as it is served with a pint of room-temperature bitter. ■

Ancient science

Great minds do not think alike

Anaximander. By Carlo Rovelli. Translated by Marion Lignana Rosenberg. *Riverhead Books; 272 pages; $18. Allen Lane; £16.99*

OF THE THREE men usually credited with founding the disciplines of philosophy and natural science, Anaximander comes second, sandwiched between his teacher, Thales, and his student, Anaximenes. Being second, it turns out, was crucial. Though the polymath (who was born around 610BC) admired his teacher, he wasn't afraid to challenge him. Thales sought the origin of all things in water; Anaximander preferred as his first principle the less tangible *apeiron,* the "indefinite" or "infinite".

A willingness to take the master down a peg or two, according to Carlo Rovelli, a theoretical physicist, is key to the practice of science. Lacking the deference a disciple owes to a prophet, but without the bitter contempt of an apostate, "Anaximander discovered a third way," he writes, and "modern science in its entirety is the result of the discovery of this third way."

Mr Rovelli's book, first published in French in 2009 and newly translated into English, is not a straight biography, as little is known of Anaximander's life and hardly any of his original writing survives. Instead, it focuses on his revolutionary idea that the best way to uncover nature's secrets is to question everything. Anaximander built his own cosmology on the work of past sages, interrogating their theories and making corrections where needed. He invented a process that allowed knowledge to grow from generation to generation, and enabled humanity to reap the benefits.

The consequence of Anaximander's irreverence was uncertainty. Mr Rovelli argues that is a price worth paying: "The reliability of science is based not on certainty but on a radical lack of certainty." Anaximander and his followers rejected mythological explanations. They replaced revelation with observation and faith and scripture with reason. As a result, Mr Rovelli avers, they set civilisation on a new course, one in which progress is made less by accumulating facts than by knowing what it is you do not know.

For Thales, Anaximander and Anaximenes, all citizens of Miletus, a Greek city on the western coast of Anatolia, doubt was a birthright. Positioned between the more ancient civilisations of Egypt and Mesopotamia, and possessing all the natu- ▸▸

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ral curiosity of a young, mercantile society, the residents of Miletus were exposed to a variety of beliefs. They could test one doctrine against another, while being beholden to none and sceptical of all. "Civilisations flourish when they mingle," Mr Rovelli says. "They decline in isolation."

Mr Rovelli is a champion of diversity, both cultural and ideological. Just as the citizens of Miletus profited from the wisdom of their foreign neighbours, modern societies benefit when they encourage the free exchange of ideas, he insists. Among the ancient Greeks, this capacity to assimilate a variety of traditions led not only to the birth of science, but of democracy—a translation of Anaximander's irreverence for established ways of thinking into the realm of politics.

The territory Mr Rovelli covers is not unfamiliar, though he notes that these days it is less fashionable to venerate long-dead white male thinkers. Still, the author believes it is worth championing the inquisitive exploration of the universe that began with Anaximander and his colleagues. He is eager to defend this anti-traditionalist tradition against both extreme relativists, who believe there is no truth outside a particular time and culture, and absolutists who believe there is only one incontrovertible truth.

"Our knowledge, like the Earth, floats in nothingness," Mr Rovelli says. "Its provisional nature and the underlying void do not make life meaningless; they make it more precious." This book offers a timely rebuttal to those who would sacrifice the vital legacy of Western science—and the progress that comes with it—on the altar of cultural sensitivity or by retreating to the safety of metaphysical revelation. ■

Back Story The curtain and the light

In Amsterdam the genius of Johannes Vermeer is on display as never before

A YOUNG WOMAN in a blue night jacket reads a letter that she holds up to her chest. The morning light glints on the metal tacks in her chairs. Her lips are slightly parted, as if she is murmuring the message aloud.

The intimacy of Johannes Vermeer's domestic scenes can seem almost voyeuristic. Some of his figures look at you as if turning towards an intruder. Yet they are also tantalisingly inscrutable, glimpsed from a distance or sealed in private reveries. In "Woman in Blue Reading a Letter", you see the light but not the window it is pouring through. You see the letter but not the words.

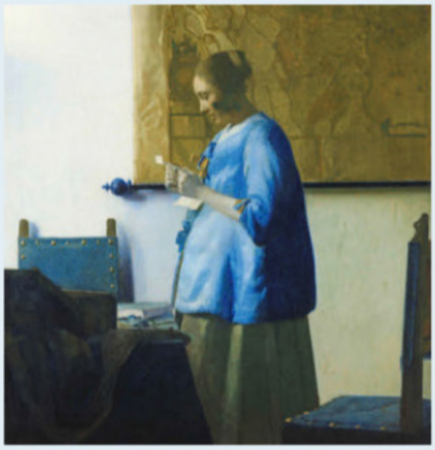
The painting is among the treasures of the Rijksmuseum in Amsterdam and is among the 28 by Vermeer, gathered from seven countries, in an exhibition that opens there on February 10th. That is around three-quarters of his surviving works—more than have ever been shown together before, and more than the painter himself would have seen in one go, notes Taco Dibbits, the museum's director. It is a one-off tribute to his genius, and his particular form of it: the fierce, patient genius of perfected technique.

In the absence of letters or diaries, Vermeer's personality is famously hazy. Still, documents and records plot the outline of his life. He was born in 1632 in Delft, where his parents ran an inn called the Flying Fox. His well-heeled Catholic mother-in-law may have disapproved of him, a lowly Protestant-born artist. He had more than a dozen children. Early on, young and ambitious, he painted big: a myth, a Bible scene, a saint.

In around 1657 his canvases and themes shrank, and he made his leap to immortality. In troubled times, nouveau-riche Dutch collectors wanted pictures of refined interiors and everyday life. Vermeer's contemporaries developed genres and techniques that he emulated, then soared beyond them in his use of colour and perspective and, above all, his unmatched mastery of light.

Take "The Love Letter", in which a maid has handed a letter to her seated mistress. The woman seems perturbed, the maid puckish; perhaps she already knows the news. The viewer is positioned in the shadows beyond a drawn curtain, a recurring motif in these pictures. Eavesdropping on the conversation in "Officer and Laughing Girl", you see the girl's bright grin but the features of the hulking officer are obscure. When men intrude into Vermeer's domesticity, tension courses beneath the decorum. In "The Glass of Wine", light sparkles on the emptying glass that masks the woman's face. The man's hat shades his eyes.

Vermeer's solo figures read and write, pour milk, make music or lace. A quiet drama hums below their repose, too. Nothing happens yet something seems to, in their heads and yours. The longing and vulnerability in the face of "Girl with a Pearl Earring" are an invitation to storytelling and memes; here she keeps company with the other close-up character studies he painted in the mid-1660s.



Through such juxtapositions the show traces the development of Vermeer's craft and the modulations in its themes and moods. He was probably familiar with the *camera obscura*, a device that projected an image through a pinhole and onto a screen in a darkened chamber (new research suggests he may have been introduced to it by the Jesuits of Delft). As Mr Dibbits explains, the contraption's influence is evident in the dots of colour the artist used to simulate the effects of light, the resulting mix of sharpness and blur making his vision seem startlingly real.

In this way he turned a couple of rooms and a few objects—a lute, a glass, some pearls—into miniature breathing worlds. You need not know all the allegorical meanings of his props, nor the socioeconomic connotations of the clothes, to sense the depth under the surface. Letters written and received, the maps mounted on Vermeer's walls—and, above all, those windows and that light—imply and withhold the promise and peril of the world outside.

He died in 1675, penniless at 43 after the outbreak of war ruined the Dutch art market and him. Little-known for the next two centuries, today he is an artistic deity. At the heart of the Rijksmuseum's mesmerising homage is that exquisite combination of intimacy and distance. Painted more than 350 years ago, his subjects still seem hauntingly alive, but their thoughts and secrets will for ever be theirs alone. As well as any painter, in other words, Vermeer did something that painting may do best: he captured the eternal mystery of other people.

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- **Formal Dinner at Divinity School**
- **Exhibit Hall**

Tuesday, April 4

- **Sessions: 9 continuous simultaneous tracks starting at 7:00AM**
- Adult Literacy, Early Childhood/Primary Literacy, Research, Evaluation And Social Impact, Learning Disabilities, Literacy Programs And Goals, Literacy Campaigns, World Book Day, Summer Reading, Read Aloud Day, Functional Literacy, Community Based Interventions For Literacy, Leadership In Literacy
- **World Literacy Summit Meet Up**
- **Exhibit Hall**

"Literacy can change everything in the life of a young person and provide a pathway to reach their full potential"

-Samantha Sida, UK Trustee of the World Literacy Foundation

Early bird rates end February 15, 2023

Register at www.worldliteracysummit.org

Tenders

NEW YORK CITY WATER BOARD

CONSULTING SERVICES IN CONNECTION WITH OBTAINING AND MANAGING FEDERAL AND STATE GOVERNMENT GRANT FUNDS

DUE: MARCH 15, 2023 AT 4:00 P.M. EASTERN TIME

The New York City Water Board (the "Board") is soliciting proposals from firms to provide grant application and funding advisory services to the Board and the New York City Department of Environmental Protection ("DEP"). The selected consultant(s) will support the Board and DEP in identifying, evaluating, applying for, administering, and monitoring sources of external funding made available by U.S. Federal and state governmental funding sources. The contemplated Scope of Work is described in the Request for Proposal documents, available using the link below. The Scope of Work will include extensive grant opportunity research, development of a grant evaluation framework, writing and compiling grant application materials, and overseeing the post-award monitoring and reporting process.

To obtain the Request for Proposals, please visit **nyc.gov/nycwaterboard** or email **onazem@dep.nyc.gov** with the message subject line "Grant Consulting RFP 2023".

The dates and times of the procurement process, and the procedures for submitting a proposal, are explained in more detail in the Request for Proposals document.

Prospective bidders are required to adhere to the procedures for communicating with the Board and DEP that are described in the RFP document.

Economic data

	Gross domestic product				Consumer prices			Unemployment rate		Current-account balance	Budget balance	Interest rates			Currency units	
	% change on year ago latest		quarter*	2022†	% change on year ago latest		2022†	%		% of GDP, 2022†	% of GDP, 2022†	10-yr gov't bonds latest,%		change on year ago, bp	per $ Feb 8th	% change on year ago
United States	1.0	Q4	2.9	2.1	6.5	Dec	8.0	3.4	Jan	-3.7	-5.5	3.6		167	-	
China	2.9	Q4	nil	3.1	1.8	Dec	1.9	5.5	Dec‡§	2.4	-5.6	2.7	§§	31.0	6.78	-6.0
Japan	1.5	Q3	-0.8	1.4	4.0	Dec	2.5	2.5	Dec	1.4	-6.1	nil		-8.0	131	-12.1
Britain	1.9	Q3	-1.2	4.0	10.5	Dec	7.9	3.7	Oct††	-5.9	-6.8	3.4		191	0.83	-10.8
Canada	3.9	Q3	2.9	3.4	6.3	Dec	6.8	5.0	Dec	-0.6	-2.3	3.0		116	1.34	-5.2
Euro area	1.9	Q4	0.5	3.3	8.5	Jan	8.4	6.6	Dec	0.9	-3.9	2.3		207	0.93	-5.4
Austria	1.7	Q3	-2.8‡	4.9	11.1	Jan	8.6	5.0	Dec	-0.5	-3.6	3.0		239	0.93	-5.4
Belgium	1.9	Q3	0.8	2.9	8.0	Jan	10.3	5.5	Dec	-2.8	-4.9	3.0		231	0.93	-5.4
France	0.5	Q4	0.5	2.6	6.0	Jan	5.9	7.1	Dec	-1.9	-5.1	2.8		210	0.93	-5.4
Germany	1.1	Q4	-1.0	1.7	8.6	Dec	8.7	2.9	Dec	4.2	-3.5	2.3		207	0.93	-5.4
Greece	2.1	Q3	-2.1	5.0	7.2	Dec	9.4	11.6	Dec	-5.8	-4.5	4.3		179	0.93	-5.4
Italy	1.7	Q4	-0.5	3.9	10.1	Jan	8.7	7.8	Dec	-0.9	-5.6	4.2		234	0.93	-5.4
Netherlands	3.1	Q3	-0.9	4.3	7.6	Jan	11.6	3.5	Dec	6.5	-1.5	2.7		225	0.93	-5.4
Spain	2.7	Q4	0.9	5.2	5.8	Jan	8.3	13.1	Dec	0.5	-4.3	3.2		218	0.93	-5.4
Czech Republic	1.6	Q3	-1.2	2.5	15.8	Dec	15.1	2.2	Dec‡	-2.4	-5.1	4.5		145	22.2	-4.1
Denmark	3.2	Q3	1.1	2.8	8.7	Dec	7.9	2.7	Dec	9.0	0.9	2.5		194	6.94	-6.0
Norway	2.5	Q3	6.3	3.5	5.9	Dec	6.4	3.2	Nov‡‡	18.8	12.2	1.4		76.0	10.3	-14.3
Poland	4.5	Q3	4.1	4.5	16.6	Dec	14.4	5.2	Dec§	-3.7	-3.7	6.0		211	4.42	-10.2
Russia	-3.7	Q3	na	-2.3	11.9	Dec	13.2	3.7	Dec§	12.3	-1.1	10.7		134	72.7	3.3
Sweden	0.6	Q4	-2.4	2.9	12.3	Dec	7.7	6.9	Dec§	3.8	-0.5	2.0		133	10.6	-13.7
Switzerland	0.5	Q3	1.0	2.0	2.8	Dec	2.8	1.9	Jan	7.0	-1.0	1.4		110	0.92	nil
Turkey	3.9	Q3	-0.5	5.1	57.7	Jan	73.5	9.9	Nov§	-8.1	-3.4	11.1		-1033	18.8	-27.7
Australia	5.9	Q3	2.6	3.5	7.8	Q4	6.4	3.5	Dec	2.1	-1.9	3.6		150	1.44	-2.8
Hong Kong	-4.5	Q3	-10.0	-3.5	2.0	Dec	1.9	3.5	Dec‡‡	5.5	-3.5	3.4		158	7.85	-0.8
India	6.3	Q3	19.3	6.9	5.7	Dec	6.5	7.1	Jan	-2.7	-6.4	7.3		53.0	82.5	-9.4
Indonesia	5.0	Q4	na	5.1	5.3	Jan	4.2	5.9	Q3§	1.0	-2.4	6.6		14.0	15,100	-4.7
Malaysia	14.2	Q3	na	7.3	3.8	Dec	3.4	3.6	Nov§	2.4	-5.3	3.8		6.0	4.30	-2.8
Pakistan	6.2	2022**	na	6.2	27.6	Jan	19.9	6.3	2021	-3.2	-7.8	14.7	†††	381	272	-36.0
Philippines	7.2	Q4	10.0	7.7	8.7	Jan	5.6	4.5	Q4§	-4.0	-7.7	6.4		137	54.8	-6.0
Singapore	2.2	Q4	0.8	3.5	6.5	Dec	6.1	2.0	Q4	18.7	-1.0	3.1		118	1.33	1.5
South Korea	1.3	Q4	-1.5	2.6	5.2	Jan	5.1	3.0	Dec§	1.2	-3.1	3.3		59.0	1,260	-5.0
Taiwan	-0.9	Q4	-4.3	2.4	2.7	Dec	2.9	3.6	Dec	12.7	-1.4	1.2		46.0	30.1	-7.3
Thailand	4.5	Q3	5.0	3.2	5.0	Jan	6.1	1.2	Nov§	-3.3	-2.7	2.6		55.0	33.5	-1.6
Argentina	5.9	Q3	7.0	5.7	94.8	Dec	72.5	7.1	Q3§	-1.0	-4.2	na		na	190	-44.3
Brazil	3.6	Q3	1.6	2.8	5.8	Dec	9.3	8.1	Nov§‡‡	-2.9	-4.7	13.3		205	5.23	0.8
Chile	0.3	Q3	-4.6	2.8	12.3	Jan	11.6	7.9	Dec§‡‡	-8.0	1.1	5.6		-5.0	798	3.7
Colombia	7.1	Q3	6.4	7.6	13.3	Jan	10.2	10.3	Dec§	-5.7	-5.0	11.9		309	4,786	-17.5
Mexico	3.5	Q4	1.6	3.1	7.8	Dec	7.9	3.0	Dec	-1.4	-2.5	8.7		102	18.9	9.1
Peru	1.7	Q3	1.8	2.6	8.7	Jan	7.9	6.2	Dec§	-4.8	-1.5	7.8		172	3.85	-0.3
Egypt	4.4	Q3	na	6.6	21.3	Dec	13.9	7.4	Q3§	-4.6	-7.4	na		na	30.4	-48.2
Israel	7.5	Q3	1.9	6.1	5.3	Dec	4.4	4.2	Dec	3.5	0.5	3.3		159	3.49	-7.7
Saudi Arabia	8.7	2022	na	8.9	3.3	Dec	2.5	5.8	Q3	12.6	3.3	na		na	3.75	nil
South Africa	4.1	Q3	6.6	2.3	7.5	Dec	7.0	32.9	Q3§	-1.5	-5.5	9.8		44.0	17.8	-13.6

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

In local currency	Index Feb 8th	% change on: one week	Dec 31st 2021
United States S&P 500	4,117.9	nil	-13.6
United States NAScomp	11,910.5	0.8	-23.9
China Shanghai Comp	3,232.1	-1.6	-11.2
China Shenzhen Comp	2,141.3	-1.5	-15.4
Japan Nikkei 225	27,606.5	0.9	-4.1
Japan Topix	1,984.0	0.6	-0.4
Britain FTSE 100	7,885.2	1.6	6.8
Canada S&P TSX	20,679.5	-0.3	-2.6
Euro area EURO STOXX 50	4,209.2	0.9	-2.1
France CAC 40	7,119.8	0.6	-0.5
Germany DAX*	15,412.1	1.5	-3.0
Italy FTSE/MIB	27,160.7	1.7	-0.7
Netherlands AEX	748.4	0.1	-6.2
Spain IBEX 35	9,227.3	1.4	5.9
Poland WIG	60,952.3	0.8	-12.0
Russia RTS, $ terms	981.8	-2.1	-38.5
Switzerland SMI	11,276.3	0.7	-12.4
Turkey BIST	4,505.3	-4.4	142.5
Australia All Ord.	7,740.5	0.4	-0.5
Hong Kong Hang Seng	21,283.5	-3.6	-9.0
India BSE	60,663.8	1.6	4.1
Indonesia IDX	6,940.1	1.1	5.4
Malaysia KLSE	1,470.8	-1.0	-6.2

	index Feb 8th	% change on: one week	Dec 31st 2021
Pakistan KSE	41,723.3	2.7	-6.4
Singapore STI	3,388.5	0.3	8.5
South Korea KOSPI	2,483.6	1.4	-16.6
Taiwan TWI	15,618.2	1.3	-14.3
Thailand SET	1,670.3	-0.9	0.8
Argentina MERV	250,125.4	-0.4	199.6
Brazil BVSP*	109,951.5	-1.9	4.9
Mexico IPC	53,125.0	-3.4	-0.3
Egypt EGX 30	16,948.1	3.3	42.3
Israel TA-125	1,836.4	0.1	-11.4
Saudi Arabia Tadawul	10,507.7	-2.6	-7.3
South Africa JSE AS	79,975.6	0.2	8.5
World, dev'd MSCI	2,802.0	-0.3	-13.3
Emerging markets MSCI	1,020.6	-2.1	-17.2

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2021
Investment grade	141	120
High-yield	439	332

Sources: Refinitiv Datastream; Standard & Poor's Global Fixed Income Research. *Total return index.

Commodities

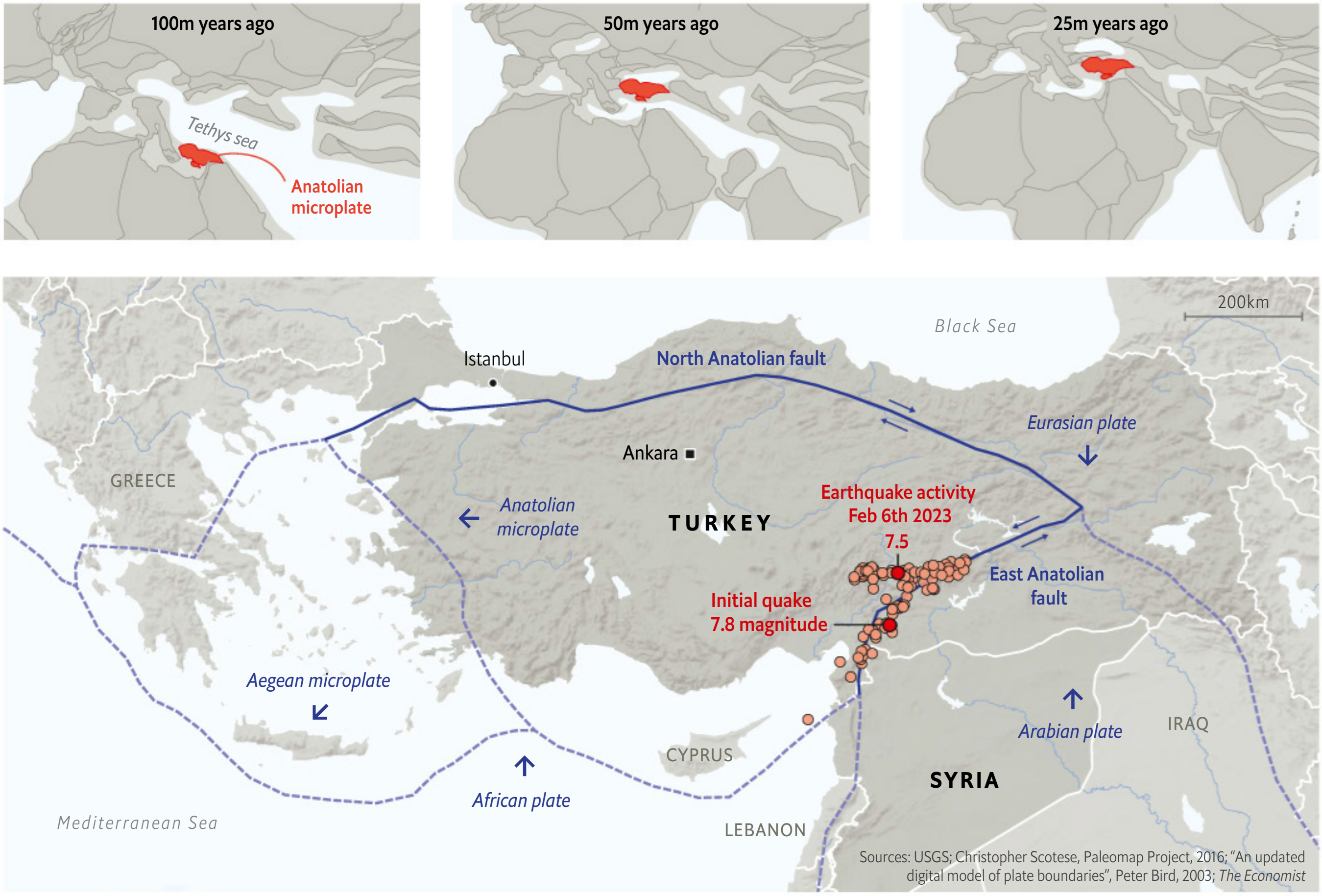
The Economist **commodity-price index**

2015=100	Jan 31st	Feb 7th*	% change on month	year
Dollar Index				
All Items	162.4	158.8	2.2	-11.7
Food	142.3	142.2	1.7	-4.9
Industrials				
All	181.1	174.4	2.6	-16.2
Non-food agriculturals	134.2	130.4	2.0	-24.7
Metals	195.0	187.5	2.7	-14.2
Sterling Index				
All items	201.3	201.9	3.4	-0.3
Euro Index				
All items	165.8	164.8	2.5	-5.7
Gold				
$ per oz	1,928.2	1,875.2	nil	2.7
Brent				
$ per barrel	85.1	83.9	4.6	-7.8

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit
economist.com/economic-and-financial-indicators

→ As the Mediterranean Sea closed up, larger plates squeezed the Anatolian microplate from all directions


100m years ago
Tethys sea
Anatolian microplate
50m years ago
25m years ago
200km
Black Sea
Istanbul
North Anatolian fault
Eurasian plate
Ankara
GREECE
Anatolian microplate
TURKEY
Earthquake activity Feb 6th 2023
7.5
East Anatolian fault
Initial quake 7.8 magnitude
Aegean microplate
African plate
CYPRUS
Arabian plate
IRAQ
SYRIA
Mediterranean Sea
LEBANON

Sources: USGS; Christopher Scotese, Paleomap Project, 2016; "An updated digital model of plate boundaries", Peter Bird, 2003; *The Economist*

Stuck in the middle

Turkey sits at the crossroads of tectonic plates as well as civilisations

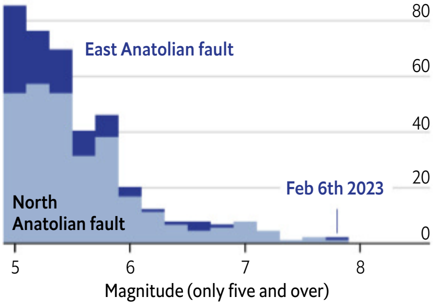
THE EARTHQUAKES that ripped across southern Turkey and northern Syria in the small hours of February 6th were among the most devastating of this century. Within three days of the disaster, the reported death toll surpassed 10,000. This horrifying impact stems largely from shoddy construction practices and from the timing of the quake, which occurred while people were sleeping. But any seismic event this powerful—the biggest quakes were of magnitude 7.8 and 7.5—would inflict grave damage. Worldwide, only around 15 earthquakes of magnitude seven or greater happen each year.

Although Turkey is far from the Pacific "ring of fire" that generates most of the world's strongest earthquakes, its neighbourhood is unusually seismically active. Quakes tend to occur along the boundaries between tectonic plates, the segments of Earth's crust that get moved around by convection currents in the hot mantle below. Along the fault lines that separate plates, crustal rocks move slowly past each other, often sticking and jamming. This causes strain to accumulate until the fault slips, causing an earthquake.

The eastern Mediterranean has a particularly complex tectonic structure involving several "microplates", including the Anatolian plate, on which most of Turkey sits. A mere 100m years ago, this plate comprised part of the southern shore of a sea called Tethys, which separated Africa from Eurasia. As this body of water closed up, leaving the Aral, Black, Caspian and Mediterranean seas as its only remnants, the Anatolian plate drifted north. It then got squeezed between four others, including the Arabian plate to the south-east (which is migrating north) and the Eurasian plate to the north (which is moving south). Both of these plates are still pushing into their small Anatolian neighbour today.

Earthquakes since 1900, near selected fault lines

Largest in a moving seven-day period



In the wake of a catastrophic earthquake near Istanbul in 1999, Turkish leaders vowed to improve seismic preparedness. That tremor originated in the North Anatolian fault, the Anatolian plate's boundary with the Eurasian plate, which has been the source of most of Turkey's large quakes. In contrast, the East Anatolian fault, where it rubs up against the Arabian plate, had not seen a quake of at least magnitude seven since modern monitoring systems began in the late 19th century.

Many other active fault systems, such as the Cascadia subduction zone in the north-western United States and south-western Canada, have gone centuries without an earthquake. Such relative quiet does not necessarily indicate low seismic risk. Strain along the East Anatolian fault had been building up year after year, making the fault ripe for a cataclysm. ■

Whisky and moderation

Pervez Musharraf, who seized power in Pakistan in 1999, died on February 5th, aged 79

When Pervez Musharraf was named army chief of Pakistan in 1998, he was a surprising choice. A hot-headed former artilleryman, known for bravery under fire and occasional indiscipline, he was third on the list of generals that Nawaz Sharif, the then prime minister, was given to pick from. He was also an outlier in a top brass dominated by ethnic Punjabis and Pushtuns. Mr Musharraf hailed from Karachi; his Urdu-speaking family had migrated there in 1947 from Delhi, where he was born. Mr Sharif, it was clear, saw him as a weak army chief he could control.

This was a familiar ploy of Pakistan's put-up civilian leaders. Zulfikar Ali Bhutto applied the same logic when appointing Muhammad Zia ul-Haq army chief in 1976. Zia promptly removed Bhutto in a coup, hanged him and ruled Pakistan until he was killed in a plane crash in 1988. Mr Sharif had similarly underestimated Mr Musharraf. The artilleryman toppled him in a coup in 1999, had Mr Sharif sentenced to life in prison and ruled Pakistan, as "chief executive" then president, until his resignation in 2008.

He seemed at first like just another bullying *fauji*. Mr Musharraf revered the army, the institution that generally presumes to run Pakistan, with a passion founded on comradeship and blood. He fought in two wars against India, in 1965 and 1971, earning a gallantry medal and reputation for impetuousness. He barely hid his scorn for civilians, especially politicians, among whom he reserved special contempt for Mr Sharif. He could never forgive the former prime minister for having dared to try to sack him on the eve of his coup. Yet even as Pakistan's swaggering generalissimo, Mr Musharraf still seemed a slightly oddball choice.

Zia, an Islamic fundamentalist with a disdain for non-Muslims and Western culture, had pushed the country far to the religious right. Mr Musharraf, though passably God-fearing, seemed not to have got the message. Educated by Catholic priests, at Karachi's prestigious St Patrick's High School, he loved rock music, dogs and whisky. He liked Western fashions so much his army comrades called him "Cowboy". A childhood spell in Turkey, where his father was stationed as a diplomat, helped form these tastes. He retained a lifelong regard for its great reformer, Kemal Ataturk. But mostly he represented the more secular, liberal Pakistan its founder, Muhammad Ali Jinnah, had once imagined the country to be.

His moderation made Mr Musharraf well-placed for the great event of his rule. Zia, with America's blithe support, had orchestrated a jihadist campaign against the Soviet occupation of Afghanistan. But on September 11th, 2001 veterans of that struggle attacked America, arousing its fury. "Either you're with us, or you are with the terrorists," thundered George W. Bush. For Mr Musharraf, unlike many of his comrades, it was not a real choice.

He provided the Americans access to Pakistani airspace and roads, allowing them to wage war in Afghanistan. He also gave them some, at least, of the al-Qaeda fighters who fled that country into Pakistan. Mr Bush saluted the coupster president as a "strong defender of freedom". Having cut off aid to Pakistan in the 1990s, Congress showered it with money. It was America's indispensable ally in the war on terror, and Mr Musharraf its admired leader.

His courage and moderation were both apparent in this shift. At home, he was denounced as an American poodle and was the target of multiple assassination attempts. Uncowed, he doubled down on his reform programme. He liberalised the media, encouraged pop culture and passed measures to protect women from the chauvinist Islamist legal regime that Zia had built.

With two Indian prime ministers, Atal Bihari Vajpayee then Manmohan Singh, he also launched a bold peace process. Mr Musharraf got it moving with a visit to his birthplace, Delhi, in 2001. And when negotiations got stuck, it was often he who seemed most willing to unstick them. His advisers looked on in alarm as the general riffed, seemingly off-the-cuff, on how to fix this or that territorial dispute.

Yet his presidency, and with it the peace process, was on borrowed time. The contradictions in his position, as an enlightened despot and moderate leader of an Islamicised army, made him, in the end, an uncertain reformer and unreliable ally. The liberal progress he brought came at the cost of the democratic institutions he suborned. His crackdown on militancy was undercut by the Islamist political parties he used to quash his democratic opponents. And also by the army. He eventually came close to admitting what was all along suspected—that, while fighting militants at home, Pakistan's generals continued supporting their old allies, the Afghan Taliban, to prevent India gaining influence in Afghanistan.

By 2007 the contradictions had become unsustainable. Pakistan was being ravaged by terrorism. The limited democracy that Mr Musharraf permitted had led to mass protests against him. Calling himself "indispensable", he briefly suspended the constitution. But the army, and America, had tired of the disorder. When his opponents won an election in 2008 he resigned the presidency and fled to London rather than face impeachment proceedings.

In his labyrinth

It is partly an indictment of Mr Musharraf's successors that his dictatorship is remembered fondly by many Pakistanis today. No leader since has come close to repeating the seriousness of his peacemaking with India. He also left some positive marks on Pakistan. His liberalisation of its media is an enduring success. Perhaps most of all, however, he was synonymous with a time when the country was important geopolitically, something few Pakistanis appreciated until the opportunity it presented had passed.

For all his serious failings, the bluff general did try to turn Pakistan's strategic moment to its advantage. But his reactionary opponents, military and civilian, sponsors of militancy and disorder, squandered the chance. And it may never come again. Whatever the merits of Pakistan's next dictator, he is unlikely to be feted in Washington, as Mr Musharraf often was. ■

CSC:Miami

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Television broadcasters have long relied on instinct, market knowledge and spreadsheets to forecast TV viewership - but instinct needs to partner with information; market knowledge is never enough; and spreadsheets are no way to excel.

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